

जलसंपदा विभागातील बांधकाम व  
व्यवस्थापन प्रक्रियेत ड्रोनव्दारे हवाई  
सर्वेक्षणाचा अवलंब करणेबाबत.

### महाराष्ट्र शासन

### जलसंपदा विभाग

शासन परिपत्रक क्रमांक: संकीर्ण २०२१/(१७३/२०२१) लपा

मंत्रालय, मुंबई - ४०० ०३२.

तारीख: ०६/०५/२०२१

#### वाचा :-

१) जलसंपदा विभाग - शासन निर्णय क्र.- संकिर्ण २०१९/(प्र.क्र.३५८/२०१९)/सिंच्य (कामे) दि.२५/०२/२०२०

#### प्रस्तावना :-

जलसंपदा विभागाच्या सिंचन व्यवस्थापन प्रक्रियेत आधुनिक तंत्रज्ञानाचा अवलंब करण्याबाबतच्या मार्गदर्शक सूचना जलसंपदा विभागामार्फत यापूर्वीच निर्गमित करण्यात आलेल्या आहेत. सदर सूचनांमध्ये हवाई सर्वेक्षणाक्वारे सिंचन क्षेत्राची मोजणी करून त्याची आकारणी संबंधीत लाभधारकांना ऑनलाईन पद्धतीने करून पाणी पट्टी वसूली वाढविण्याबाबत आवश्यक प्रणाली विकसित करण्याबाबत नमूद करण्यात आलेले आहे. सदर प्रणाली विकसित करण्याचा सर्वात प्रथम टप्पा सिंचन क्षेत्राची अचूक व जलद गतीने मोजणी करण्यासाठी आधुनिक तंत्रज्ञानाचा जसे भौगोलिक माहिती प्रणाली (GIS), हवाई सर्वेक्षण या पद्धतींचा अवलंब करणे क्रमप्राप्त आहे. भौगोलिक माहिती प्रणाली (GIS) व ड्रोनव्दारे हवाई सर्वेक्षण यापैकी कुठल्या आधुनिक तंत्रज्ञानाचा वापर जलसंपदा विभागाच्या बांधकाम व व्यवस्थापन प्रणालीत प्रभावीपणे करता येणे शक्य आहे यासाठी अतिरिक्त मुख्य सचिव (जलसंपदा) यांचे अध्यक्षतेखाली पुणे येथील दि.१२/०३/२०२१ रोजीच्या महाराष्ट्रातील सर्व कार्यकारी संचालकाच्या कार्यशाळेत M/s KPMG सल्लागार कंपनी यांच्या प्रतिनिधीनी ड्रोन सर्वेक्षणाचा जलसंपदा विभागातील बांधकाम व व्यवस्थापन प्रणाली वापराबाबत सादरीकरण केले. सदर सादरीकरणाच्या अनुषंगाने शासन स्तरावर वेळोवेळी संपन्न झालेल्या बैठकीअंती Model Request for Proposal, M/s KPMG च्या सहाय्याने बनविण्यात आली असून ती केंद्र शासनाच्या इलेक्ट्रॉनिक्स व माहिती तंत्रज्ञान मंत्रालयाच्या सन २०१८ मधील तरतुतीवर आधारीत आहे. त्यास मान्यता घेण्याची बाब शासनाच्या विचाराधीन होती. त्यानुसार खालीलप्रमाणे निर्णय घेण्यात येत आहे.

#### शासन परिपत्रक-

जलसंपदा विभागाच्या बांधकाम व व्यवस्थापन प्रणालीमध्ये ड्रोनव्दारे हवाई सर्वेक्षणाचा प्रभावीपणे वापर करण्यासाठी आवश्यक Model RFP ला मान्यता देण्यात येत असून सर्व महामंडळांनी

त्यांचे स्तरावरुन आवश्यक असलेल्या बाबीसाठी अभिकरण निश्चितीसाठी सदर Model RFP चा वापर करावा. सदर Model RFP चा वापर करून साध्य केलेल्या कामाची फलश्रुती खालीलप्रमाणे होईल याची सुनिश्चितता महामंडळाने करावी.

- १) प्रकल्पाचे एकूण सिंचन क्षेत्र तसेच खरीप/रब्बी हंगाम निहाय प्रत्यक्ष सिंचन क्षेत्राची ड्रोनव्दारे मोजणी करून त्यास Automatic water Billing System शी संलग्न करून पाणीपट्टी देयके लाभधारकांच्या भ्रमणाध्वनी वर पाठविणे. ज्यामुळे पाणीपट्टी वसुलीमध्ये भरघोष वाढ करता येणे शक्य होईल.
- २) सिंचनाची आकारणी व वसुली तक्ते तयार करणे
- ३) कालवे वितरण प्रणाली व त्यावरील सर्व बांधकामे यांची मॅपिंग करणे
- ४) लाभधारक तसेच WUA चा Master Database तयार करणे
- ५) धरणांच्या पाणलोट क्षेत्राचे व्यवस्थापन अहवाल तयार करणे
- ६) नद्यांशी संबंधित पुररेषा satellite image वर digitize करून मार्क करणे जेणे करून कुठलीही computer/mobile system वापरून बसल्याजागी Blue line/red line किंती क्षेत्राला प्रभावित करते त्याचा अचूक अंदाज जलसंपदा यंत्रणेला लावता येवू शकतो.
- ७) पुरामुळे निर्माण होणाऱ्या नैसर्गिक आपत्तीच्या वेळी बाधित होणाऱ्या क्षेत्राचा अचूक अंदाज बांधणे या यंत्रणेमुळे सहज शक्य होणार असून वेळीच उपाययोजना केल्यास जिवीतहानी टाळता येणे शक्य होईल,
- ८) सुयोग्य आपत्ती व्यवस्थापन आराखडा करता येणे शक्य होईल,
- ९) राज्यातील सिंचन प्रकल्पांच्या सर्व घटकांच्या व मालमत्तांचे रेखांकन करून घेणे धरण सुरक्षितता अहवाल तयार करणे
- १०) आपत्ती व्यवस्थापन अहवाल तयार करणे

ड्रोन सर्वेक्षण तंत्रज्ञानाचा उपयोग प्रामुख्याने सिंचनामधील पाण्याचा गैरवापर/पाणी चोरी कमी होऊन सिंचन पाणीपट्टीची वसूली वाढविण्यासाठी होणार असल्याने सिंचनाच्या पाणीपट्टीच्या प्रत्यक्ष वसूलीतून अपेक्षित असलेल्या वाढीव महसूलाचा विचार करून ड्रोनव्दारे सिंचनक्षेत्राच्या सर्वेक्षणाबाबत निर्णय महामंडळ स्तरावर घ्यावा. तसेच, महामंडळास आवश्यक असलेल्या कामांचा (एक किंवा अनेक बाबींचा) समावेश Model RFP मधील Annexure १३ मध्ये करावा व सदर कामासाठी लागणारा खर्च हा संदर्भ क्र.१ येथील शासन निर्णयानुसार करावा.

सदर शासन परिपत्रक महाराष्ट्र शासनाच्या [www.maharashtra.gov.in](http://www.maharashtra.gov.in) या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक २०२१०५०६१६०४०८२३२७ असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकित करून निर्गमित करण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

सोबत: Model RFP

(सुषमा कुडल)  
अवर सचिव, महाराष्ट्र शासन

प्रत,

१. मा.राज्यपाल, महाराष्ट्र राज्य, मुंबई
२. मा.मुख्यमंत्री, महाराष्ट्र राज्य, मंत्रालय, मुंबई
३. सर्व मा.मंत्री / मा. राज्यमंत्री, महाराष्ट्र राज्य, मंत्रालय, मुंबई
४. मा. विरोधी पक्ष नेते, विधानसभा / विधानपरिषद, महाराष्ट्र राज्य, विधानमंडळ सचिवालय, मुंबई
५. मा.मुख्य सचिव यांचे स्विय सहायक, मंत्रालय, मुंबई
६. अतिरिक्त मुख्य सचिव, जलसंपदा, यांचे स्विय सहायक, मंत्रालय, मुंबई
७. प्रधान सचिव, माहिती व जनसंपर्क महासंचालनालय, मंत्रालय, मुंबई.
८. प्रधान सचिव, कृषी विभाग, मंत्रालय, मुंबई
९. प्रधान सचिव, जलसंधारण विभाग, मंत्रालय, मुंबई
१०. सचिव (लाक्षेपि) जलसंपदा, यांचे स्विय सहायक, मंत्रालय, मुंबई
११. सचिव (प्रकल्प समन्वय) जलसंपदा, यांचे स्विय सहायक, मंत्रालय, मुंबई
१२. महालेखापाल, महाराष्ट्र राज्य (लेखा व अनुज्ञेयता) मुंबई/नागपूर.
१३. महालेखापाल, महाराष्ट्र राज्य (लेखा परिक्षा), मुंबई/नागपूर.
१४. सर्व कार्यकारी संचालक, पाटबंधारे विकास महामंडळ, जलसंपदा विभाग, महाराष्ट्र राज्य
१५. महासंचालक, मेरी, नाशिक
१६. सर्व मुख्य अभियंते, जलसंपदा विभाग, महाराष्ट्र राज्य
१७. सर्व अधीक्षक अभियंते, जलसंपदा विभाग, महाराष्ट्र राज्य
१८. आंतर वित्त सल्लागार व सह सचिव, जलसंपदा विभाग, मंत्रालय, मुंबई.
१९. लपा कार्यासन संग्रहार्थ



**Corporation Logo**

**Name of Corporation**  
(A Govt. of Maharashtra Undertaking)

**[Name of Circle]**

**[Name of Division]**

***RFP for appointment of agency for undertaking Geospatial  
technological activities for various works***

**Issued By**

**[Name of Chief Engineer]**

**[Address]**

**Tender Reference No. - xxxx/XX/2021**

**Date: XX Xxx, 2021**

**Government of Maharashtra**  
**Water Resources Department**  
[Name of the Corporation]  
[Name of the Circle]  
[Name of the Division]

**Detailed Tender Notice No. - xx for 2012-22**

1. On-line electronic bids in prescribed format for below mentioned work are invited for Executive Engineer, [Division Name], on behalf of Water Resource Department from bidders with proven experience. Tender Documents are available for online bid preparation & Submission on Mahatender portal from xx/xx/yyyy to xx/xx/yyyy. The time schedule for various bidding phases is given in the detailed tender notice, which is also available on Mahatender portal as a part of the Tender documents.
2. Method of evaluation of selection of successful Bidder and award of contract to Bidder shall be based on Cost Based Selection (L1) after successful Technical qualification

Sr. No	Name of Work	Tender fee	EMD amount	Last date of submission of tender	Time for completion
1	RFP for appointment of agency for undertaking Geospatial technological activities for various works	INR 5000/-	INR 50,000/-	xx/xx/yyyy Time: 17.00 PM	xx months

3. The forms of Tender documents are available on the <https://mahatenders.gov.in>. The aspiring Bidders will have to download Tender form, from the website mentioned above. The bidder must fill in online format and upload information regarding Tender online. Also, bidder must download the Tender application form from Mahatender portal, fill it and upload the scanned copy of duly filled form, along with **required documents with proper page numbering**.
4. While submitting duly filled tender document through <https://mahatenders.gov.in> Bidder need to pay online E.M.D. of INR xxxxxxxx (xxxx Lakh xxxx Thousand xxxxxxxx hundred Only)
5. The bidder must prepare & submit Tender Documents online on or before last date of submission as mentioned in tender notice.
6. The bidder should upload the documents in readable form **with proper page numbering**. Bidder should take trial of uploads by taking printout. The unreadable documents will be treated as null & void. The remaining documents will be evaluated. The decision of tender opening committee regarding this will be final and binding to all bidders.
7. All rights are reserved by Executive Engineer, [Division Name] to reject any or all Tender documents without assigning any reason.

*Appointment of agency for undertaking Geospatial technological activities*

8. Bids submitted without EMD and required documents will be summarily rejected
9. Earnest Money Deposit is to be obtained from the bidders except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department
10. No Hardcopy of Technical and Financial bid will be entertained at any circumstances
11. Time schedule for this tender as follows-

<b>Sr.</b>	<b>Details</b>	<b>Start Date</b>	<b>Hrs.</b>	<b>End Date</b>	<b>Hrs.</b>
1	Publication of tender	xx/xx/yyyy	18.30	xx/xx/yyyy	17:00
2	Document download	xx/xx/yyyy	18.35	xx/xx/yyyy	17.00
3	Last date of online submission of queries	xx/xx/yyyy	18.35	xx/xx/yyyy	15.00
4	Response to Seek clarifications			xx/xx/yyyy	15.00
5	Bid Submission	xx/xx/yyyy	18.35	xx/xx/yyyy	17.00
6	Opening of Technical Bid	xx/xx/yyyy	15.00		
7	Date of Presentation	To be communicated later.			
8	Opening of Financial bid	To be communicated later.			

12. For any bidding portal technical related queries please call the helpdesk-The 24x7 Helpdesk Number 0120-4200462, 0120-4001002,  
Mobile- 8826246593  
E-Mail- [support-eproc@nic.in](mailto:support-eproc@nic.in)

Executive Engineer

[Division Name]

[Address]

Phone No. - [xx-xxxxxxxx, xxxx-xxxx]

E-mail- [xxxxx.xxxxxxxx@xxxx.com](mailto:xxxxx.xxxxxxxx@xxxx.com)

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## **Invitation for Proposal**

**<< Name of Organization calling for tender>>**, Water Resources Department (formerly known as Irrigation Water Resources Department) invites e-tenders for “Appointment of agency for undertaking Geospatial technological activities for various works”.

Bidder/ Agencies are advised to study this RFP document carefully before submitting their proposals in response to the RFP Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

The complete bidding document has been published on <https://mahatenders.gov.in> for the purpose of downloading. The downloaded bidding document shall be considered valid for participation in the electronic bidding process (e-Tendering) subject to the submission of required tender/ bidding document fee and EMD.

Please note that the interested parties will have to access the website <https://mahatenders.gov.in> and get themselves registered so as to enable them to participate in the e-Tendering process before due date.

The Bidder has to use two-envelope (Technical Bid and Commercial Bid) method through E-Tendering in order to fill up a Tender.

Bidder (authorized signatory) shall submit their offer online in electronic formats for preliminary qualification, technical and financial proposal. However, Tender Document Fees, and Earnest Money Deposit (EMD) shall be paid as per the details provided in the RFP. WRD shall not be responsible for delay in online submission by bidder due to any reason.

For this, bidders are requested to upload the complete bid proposal well in advance so as to avoid issues like slow speed, choking of web site due to heavy load or any other unforeseen problems.

Bidders are also advised to refer “Bidders Manual Kit” available at <https://mahatenders.gov.in> for further details about the e-tendering process.

**<< Name of Organization calling for tender>>**, and/or Water Resources Department shall not be bound to furnish any answers thereafter. All the terms and conditions mentioned in the tender application are binding on Bidders.

For any technical queries, please contact 24x7 helpdesk 180030702232, 07878107985/86, 07878007972/73.

Executive Engineer  
[Division Name]  
[Address]

## A. Disclaimer

1. **<< Name of Organization calling for tender>>**, Water Resources Department has issued this Request for Proposal (hereinafter referred to as "RFP") for "Appointment of agency for undertaking Geospatial technological activities for various works" on such terms and conditions as set out in this RFP document, including but not limited to the Technical Specifications set out in different parts of this RFP document.
2. This RFP has been prepared with an intention to invite prospective Applicants/Bidders and to assist them in making their decision of whether or not to submit a proposal. It is hereby clarified that this RFP is not an agreement and the purpose of this RFP is to provide the bidder(s) with information to assist them in the formulation of their proposals. This RFP document does not purport to contain all the information bidders may require. This RFP document may not be appropriate for all persons, and it is not possible for Water Resources Department to consider the investment objectives, financial situation and particular needs of each bidder.
3. **<< Name of Organization calling for tender>>**, Water Resources Department has taken due care in preparation of information contained herein. However, this information is not intended to be exhaustive. Interested parties are required to make their own inquiries and respondents shall be required to confirm in writing that they have done so, and they do not solely rely on the information contained in this RFP in submitting their Proposal. This RFP includes statements, which reflect various assumptions and assessments arrived at by Water Resources Department in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require.
4. This RFP is not an agreement by and between **<< Name of Organization calling for tender>>**, and/or Water Resources Department and the prospective bidders or any other person. The information contained in this RFP is provided on the basis that it is non-binding on **<< Name of Organization calling for tender>>**, Water Resources Department, any of its authorities or agencies, or any of their respective officers, employees, agents, or advisors. Water Resources Department makes no representation or warranty and shall incur no liability under any law as to the accuracy, reliability or completeness of the information contained in the RFP document. Each Bidder is advised to consider the RFP document as per his understanding and capacity. The bidders are also advised to do appropriate examination, enquiry and scrutiny of all aspects mentioned in the RFP document before bidding. Bidders are encouraged to take professional help of experts on financial, legal, technical, taxation, and any other matters / sectors appearing in the document or specified work. Bidders are also requested to go through the RFP document in detail and bring to notice of **<< Name of Organization calling for tender>>**, Water Resources Department any kind of error, misprint, inaccuracies, or omission in the document.
5. **<< Name of Organization calling for tender>>**, Water Resources Department reserves the right not to proceed with the project, to alter the timetable reflected in this document, or to change the process or procedure to be applied. **<< Name of Organization calling for tender>>**, Water

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Resources Department also reserves the right to decline to discuss the Project further with any party submitting a proposal.

6. No reimbursement of cost of any type shall be paid to persons, or entities submitting a Proposal. The Bidder shall bear all costs arising from, associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by << **Name of Organization calling for tender>>**, Water Resources Department or any other costs incurred in connection with or relating to its Bid.
7. This issue of this RFP does not imply that << **Name of Organization calling for tender>>** and/ or Water Resources Department is bound to select and pre-qualify Bids for Bid Stage or to appoint the Selected Bidder or Concessionaire, as the case may be, for the project and Water Resources Department reserves the right to reject all or any of the Bids without assigning any reasons whatsoever.
8. << **Name of Organization calling for tender>>**, Water Resources Department may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.
9. << **Name of Organization calling for tender>>** and/or Water Resources Department , its employees and advisors make no representation or warranty and shall have no liability (for any cost, damage, loss or expense which may arise from or is incurred or suffered on account of anything contained in this RFP or otherwise, including but not limited to the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to be part of this RFP or arising in any way with eligibility of Bidder for participation in the Bidding Process) towards any Applicant or Bidder or a third person, under any law, statute, rule, regulation or tort law, principles of restitution or unjust enrichment or otherwise.
10. << **Name of Organization calling for tender>>** and/or Water Resources Department also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statement contained in this RFP
11. The relatives, near relatives of employees of the << **Name of Organization calling for tender>>**, Water Resources Department /Board are prohibited from participation in this bid. The near relatives for this purpose are defined as:
  - Members of a Hindu Undivided Family
  - Their husband or wife.
  - The one is related to the other in the manner as father, mother, son(s), son's wife (daughter-in-law), daughter(s) & daughter's husband (son-in-law), brother(s) & brother's wife, sister(s) and sister's and sister's husband (brother-in-law)
12. Interested parties, after careful review of all the clauses of this 'Request for Proposal', are encouraged to send their suggestions in writing to << **Name of Organization calling for tender>>**, Water Resources Department. Such suggestions, after review by << **Name of**

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**Organization calling for tender>>**, Water Resources Department, may be incorporated into this 'Request for Proposal' as a corrigendum which shall be uploaded onto the e-tendering website:  
<https://mahatenders.gov.in>

## B. Definitions

#	Term	Definition
1	Assets	The things that is useful and value or resources owned by the Water Resources Department.
2	Bidder	The “ <b>Bidder</b> ” shall mean the Organization on whose behalf the tender response has been submitted and bid to perform the Contract has been accepted by the Employer and is named as such in the Contract Agreement and shall mean sole Bidder or the Lead Bidder in case of Consortium.
3	Business Day	“ <b>Business Day</b> ” means any day that is not a Sunday or a public holiday.
4	Chief Engineer	It shall mean the Chief Engineer, [Region name], Water Resources Department
5	Command Area	Command area is the declared area of an irrigation where irrigation facility is available by way of flow or lift irrigation.
6	Confidential Information	“ <b>Confidential Information</b> ” means any information disclosed to or by any Party to this Contract and includes any information in relation to the Parties, a third party or any information including any such information that may come to the knowledge of the Parties hereto / Bidder by virtue of this Contract that is by its nature confidential or by the circumstances in which it is disclosed confidential; or is designated by the disclosing Party as confidential or identified in terms connoting its confidentiality; but does not include information which is or becomes public knowledge other than by a breach of this Contract;
7	Contract	“ <b>Contract</b> ” means the Tender and all Annexes thereto, the Agreement entered into between the selected Bidder together with the Employer as recorded in the Contract form signed by the Employer and the Bidder including all Annexes thereto and the agreed terms as set out in the bid, all documents incorporated by reference therein and amendments and modifications to the above from time to time. It shall include following documents. a. Tender Documents. b. Specifications. c. Drawings. d. Tender document & information / data submitted by bidder. e. Common set of conditions / Replies to seek clarifications. f. Annexures
8	Contract Value	“ <b>Contract Value</b> ” means the price payable to the Bidder under this Contract for the full and proper performance of its contractual obligations.
9	Corporation	“Corporation” shall mean the [Corporation Name] acting through its Executive Director, as defined in Maharashtra Govt. Act XXVI of [XXXX]. [Corporation Name] is a body corporate constituted under the Maharashtra Govt. Act [XXXX] and published in Maharashtra Govt. Gazette dated [XX-XX-XXXX]. The Headquarters of the [Corporation Name], for short, and hereafter referred to only as Corporation. The head quarter of the [Corporation Name] The official postal address for correspondence is – Office of the Executive Director, [Corporation Name]

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10	Drawings	It shall mean maps, drawings, enclosed with tender or given on WRD official website <a href="https://wrda.maharashtra.gov.in/">https://wrda.maharashtra.gov.in/</a> in of the contract and shall include any modifications of such drawings and any further detailed drawings as may be issued by the Engineer-in-charge from time to time.
11	Effective Date	<b>"Effective Date"</b> means the date on which this Contract comes into force. This Contract shall come into force and effect on the date (the "Effective Date") of the Employer's notice to the Bidder instructing to begin carrying out the activities.
12	Engineer / Engineer in charge	It shall mean the Executive Engineer in-charge of the work and shall also include the superior Officers of the Engineering Departments of the Corporation, i.e. the Superintending Engineer of respective Circle or the Chief Engineer of respective region.
13	Engineers Representative	It shall mean the Assistant Executive Engineer/ Assistant Engineer (Grade I) /Sub-Divisional Engineer / Sub-Divisional Officer, who is direct in-charge of the works and shall also include Assistant Engineer Grade II/Sectional Officer/Junior Engineer/Civil Engineering Assistant/Canal Inspector/Mojnidar who is direct in-charge of concern influence area.
14	Employer	<b>"Employer"</b> means any entity or unit under WRD, authorized by department or any corporation acting through Executive director to execute the project.
15	Executive Engineer	Executive Engineer means the in-charge Executive Engineer of concerned division specified in sr.no. 2.1.2 of section – II
16	Influence Area	Influence area is the sum of command area of a project and adjacent peripheral area where irrigation benefit from project are reaped.
17	Parties	<b>"Parties"</b> mean the Employer, The Bidder, Application Service Provider and OEM and "Party" means either of the Parties.
18	Portal / Web Site	Portal/Web Site means official web site for e-tendering having following web address. <a href="http://mahatenders.gov.in">http://mahatenders.gov.in</a>
19	Project	The " <b>Project</b> " shall mean Design, Development, Testing, Implementation, Hosting, Operation & Maintenance of Web and Mobile based Integrated Irrigation Management Application for Maharashtra Water Resource Department
20	Services	<b>"Services"</b> mean services to be provided as per the requirements / conditions specified in this tender / contract. In addition to this, the definition would also include other related/ancillary services that may be required to execute the scope of work under the Contract.
21	Superintending Engineer	It shall mean the Superintending Engineer of concerned Circle to whom Superintendence of the work is assigned by [Corporation Name] as specified in sr.no. 2.1.2 of section – II.
22	Works	It shall mean scope of work mentioned in Section II and annexure 17, 18,19 in section IV, to be executed as per specifications and drawings of Tender document.

### **C. Abbreviations and Acronyms**

The following abbreviations and acronyms defined in this RFP are as under

BG	Bank Guarantee
CIP	Completed Irrigation Programme
EMD	Earnest Money Deposit
GoM	Government of Maharashtra
IB	Irrigation Billing
IPR	Intellectual Property Rights
IM	Irrigation Management
MDM	Master Database Module
NI	Non-Irrigation
OEM	Original Equipment Manufacturer
PBG	Performance Bank Guarantee
PIP	Preliminary Irrigation Program
PQ	Pre-Qualification
QA	Quality Assurance
RFP	Request for Proposal
RTU	Remote terminal Unit
SI	System Integrator
SLA	Service Level Agreement
WRD	Maharashtra Water Resources Department
WUA	Water user association

#### D. Events and Dates

Table: Key Events and Date		
#	Information	Details
1.	Advertising Date	From xx/xx/yyyy, Time: 08:30 AM
2.	Download Date	From xx/xx/yyyy, Time: 06:35 PM To xx/xx/yyyy, Time: 05:00 PM
3.	Last date to send in requests for Seek clarifications	Seek Clarification Option at <a href="http://www.mahatenders.gov.in">www.mahatenders.gov.in</a> Till xx/xx/yyyy, Time: 03:00 PM
4.	Date, Time and place of Pre- Bid meeting	Date: xx/xx/yyyy, Time: 11:30 AM [Executive Engineer] [Address]
5.	Release of response to clarifications would be available at	<a href="http://www.mahatenders.gov.in">www.mahatenders.gov.in</a> Date: xx/xx/yyyy, Time: 03:00 PM
6.	Last date (deadline) for online submission of bids	Date: xx/xx/yyyy, Time: 05:00 PM on <a href="http://www.mahatenders.gov.in">www.mahatenders.gov.in</a>
7.	Technical Bid Opening Date & Time	From xx/xx/yyyy, Time: 11:00 AM
8.	Date for Presentation	To be informed
9.	Financial Bid Opening Date & Time	To be informed
10.	Address for communication	[Executive Engineer] [Address]
11.	Bid related queries	<a href="mailto:xxx.xxx@xxx.com">xxx.xxx@xxx.com</a> <a href="mailto:xxx.xxx@xxx.com">xxx.xxx@xxx.com</a>
12.	Technical queries	<a href="mailto:xxx.xxx@xxx.com">xxx.xxx@xxx.com</a> <a href="mailto:xxx.xxx@xxx.com">xxx.xxx@xxx.com</a>

#### E. Other Important Information Related to Bid

Table: Other Information		
#	Item	Description
1.	Tender Fee	INR 5000 /- (Rupees Five Thousand Only) GST to be paid on <a href="http://www.mahatenders.gov.in">www.mahatenders.gov.in</a>
2	Earnest Money Deposit (EMD)	INR 50,000 /- (Fifty Thousand Only) in form of Online from Nationalized Bank / Scheduled Commercial Bank in India. EMD should be refunded to the successful bidder on receipt of Performance Bank Guarantee value.
3.	Bid Validity Period / Proposal must remain valid	(90) Ninety days from the date of submission of Financial Bids

**Table: Other Information**

#	Item	Description
4.	Security deposit / Performance Bank Guarantee value	4 % of contract value / Bid value of successful Bidder from a Nationalised Bank and must be valid for the period of [12 Months] beyond the project completion period. Successful Bidder shall pay PBG (Performance Bank Guarantee) within 15 working days of notification of award.

## **F. RFP Structure**

This Request for Proposal document consists of four sections as detailed below. All these sections together collectively constitute the tender:

### **Section - I: Instruction to Bidders**

Section - I of RFP provides Introduction to the project and bidding process details. It broadly covers the instructions to the Bidders, bid opening and evaluation process, contract finalization, award of contract and bid formats.

### **Section - II: Scope of Work**

Section - II of RFP provides broad scope of work and roles and responsibilities of Bidder. This volume also gives an overview of the solution, payment terms and conditions, Service Level Agreements and functional requirements.

### **Section - III: Draft Agreement**

Section – III of RFP includes Draft agreement which will be binding to the selected Bidder. This contains general terms and conditions to be issued to the successful Bidder(s) on the outcome of the tender process.

### **Section - IV: Annexures to RFP**

Section – IV of RFP includes standard templates of annexures to be submitted by the bidder.

# **Section - I**

# **INSTRUCTIONS**

# **TO BIDDERS**

## **1.1 Introduction & background information**

This section contains information about the Water Resources Department, the project background, aim and objectives.

### **1) About WRD**

Water Resource Department (WRD) (formerly Irrigation Department) is the nodal department, which is entrusted with survey, planning & design, construction & management of major, medium and minor irrigation projects.

Maharashtra has been pioneering for key initiatives in the field of water resource management. Maharashtra is one of the few states to have its own water policy. It is also the first state in the country to have regulatory authority in the water sector. Maharashtra also boosts Participatory Irrigation Management (PIM).

In order to accelerate the completion of irrigation projects in Maharashtra State, the Government has established five Irrigation Development Corporations in the state namely Maharashtra Krishna Valley Development Corporation (MKVDC), Vidarbha Irrigation Development Corporation (VIDC), Tapi Irrigation Development Corporation (TIDC), Godavari Marathwada Irrigation Development Corporation (GMIDC), Konkan Irrigation Development Corporation (KIDC).

### **2) Project Background**

1) Irrigation management has been always an important and crucial activity for Maharashtra Water Resources Department (WRD). Water being a scarce source, new schemes like ‘more crop per drop’ are envisaged and being implemented. With the advent of new technology, better irrigation management and better service delivery is expected by our important stakeholder i.e. farmer.

Maharashtra state is pioneer in preparation of irrigation status report, water audit and benchmarking report. Water storage, Preparation of Preliminary Irrigation Program, Rotational water Scheduling, water accounting, measurement of cropped area, assessment and recovery, benchmarking are the main steps involved in water management.

As of now, measurement of irrigated cropped area of project is done for fields irrigated on flow and lift (on canals, rivers and reservoir) by field visit. Having measured the actual cropped area, a report depicting crop-wise area measurements is prepared called “mojnianti ahwal”. Draft assessment sheets are prepared based on the measurements in assessment sheet. Verification of these sheets by the farmers is expected through ‘Chawadi Wachan’ (Reading Publicly). After approval of assessment sheets of all villages in command of the project, abstract of assessment sheet is prepared. After this, the demand statements are sent to field officers for recovery of water cess & bills to individual farmers are given.

Measurement of irrigated cropped area is important not only from revenue collection point of view but also for evaluation of the performance of a project. Cropping patterns in command areas of irrigation projects are changing and are not in line with designed cropping pattern of the project. The command areas of irrigation projects are also expanding due to availability of modern pumps delivering water at far distance from the source. Also, in some cases command areas are found to be shrinking for few projects due to effects of urbanization. The field staff of WRD involved in irrigation management is reduced tremendously. The job of measurement of cropped area and preparation of assessment sheets (Aakarni Takta) in stipulated time has been a tough task these days.

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As per policy of Government of Maharashtra, Operation and maintenance works has to be funded and completed through the water cess earned for the project. Hence correct assessment of water cess which largely depends on measurement of irrigated cropped area has gained more importance.

Further, Maharashtra Water Resources Department has a large number of assets. Having a GIS based database with proper as-built measurements; and its continual monitoring are necessary to be able to ensure attending to them in-time and reducing major repair works.

The maintenance and monitoring of the catchment area of each project is necessary to ensure that water storage is maximum and erosion effects are minimized. This also helps in planning for any post disaster activities.

Considering that Maharashtra Water Resources Department's (WRD) projects are in areas which can promote tourism, proper planning will help in facilitating tourism as well as protecting the catchment areas and it's assets.

- 2) Water Resources Infrastructure is developed by WRD in state. WRD deals with Planning, Investigation, Design, Construction and Maintenance of Major, Medium and Minor projects in the state. Different types of structures like Dams, Canals Distribution network, Lift Irrigation schemes, Barrages are being constructed to store rainwater and supply it for Domestic, Irrigation, Industrial, Hydropower, Navigation and Environmental purposes. Currently most of the activities are performed manually in the conventional manner which is a time-consuming activity. The huge amount of time and human efforts are invested in manual environment which results in **delay** at different stages of project which directly impact the entire project life cycle. WRD aims to make effective use of ICT and better deliver its project management services to the stakeholders and at the same time assist the policymakers to design effective plans and policies to better facilitate the stakeholders of this service. It is **expected** that this fully automated system can significantly reduce the effort required in traditional construction monitoring and reporting procedures. The system provides convenient and smart ways of site supervision and management. The system results in better operations, planning and effective on-site **control**. In order to automate the process & provide real time information about work monitoring progress of ongoing works to higher management & other stake holder, it is decided to design & develop Works Monitoring System based on the input provided by Drone Survey.
- 3) WRD intends to create GIS database for information management system and decision support system which includes Aerial survey of influence area, Creation of GIS layers of crop details after crop identification, cadastral maps, irrigation structure, distribution network, assets, stakeholder's database etc.
- 4) The various potential works identified for which WRD intends to use Aerial / drone based Geospatial technology mapping are as below:
  - Project progress monitoring of **ongoing** WRD projects
  - Inspection of safety and health of dams and other irrigation structures

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- 3D Mapping of WRD assets
- Planning for tourism related activities
- Water quality monitoring
- Catchment Area Management
- Project Irrigation Potential analysis
- Post Disaster Mapping & Planning of Mitigation Measures
- Assessment of crops for irrigational billing

The Employer does not, in any sense, meaning or otherwise, assure that the above works will necessarily be undertaken through this RFP or otherwise. It is made explicitly clear that the above mentioned are only the objectives/ intentions. The works to be undertaken will be identified on case of case basis, as per need.

### **3) Aim**

It is aimed to **use** Geospatial Technologies for various activities in Water Resources Department such as Construction Management, Irrigation Management and Administrative Management etc.

### **4) Objectives**

#### **A. Key objectives of the Drone survey in Water Resource Department**

##### **1. Asset Mapping**

The cost of Water Resource department's assets are quite significant. These assets are the State's investment to ensure water security. Negligence towards the assets means, negligence towards the public funds invested in water security. The very first step towards any investment care is knowing, where the investment is made and having its information readily available and accessible to all stakeholders. The Geo-spatial technology can help in mapping of water bodies and structures. Geo-spatial technology aided through drone survey can be used for mapping of all the existing water resources elements such as water bodies, rivers, reservoirs, dams, canal network, LIS, HEP, KT Weir, structures, Land, Buildings etc. This mapping should be helpful in facilitating multiple reforms in policies & other levels of decision making by the efficient use of these data. Few of the objectives that could be identified, are as follows:

- i. Mark and prepare command area / Influence area map, of the projects.
- ii. Digitize & superimpose the WRD records such as Dam area, Canal network, Flood Line, Index maps etc. on ortho-mosaic images and create individual GIS layer, with relevant attributes based on existing data and ortho-mosaic images.
- iii. To prepare 'project wise', 'WRD office hierarchy wise', 'boundary for section', 'sub-division', 'division', 'circle', 'region and corporation' etc.
- iv. To create GIS assets layers with geometry for Dam and Dam line, Waterbodies, River, Kolhapur Type (KT) weir, Lift Irrigation Scheme, Distribution network

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- (open or pipe distribution network), Hydro Electric Projects etc. with relevant attributes.
- v. To create GIS layers for WRD owned (acquired) land and buildings, colonies etc.
  - vi. To prepare various GIS layers for source of water such as canal, open well, tube well, Location of individual lift permission
  - vii. Prepare GIS layer for Major Roads, Railway etc. in WRD area
  - viii. To collect Water User Association data and prepare separate GIS layer for it.
  - ix. To prepare Index map for each command area by using GIS assets layer.
  - x. To prepare village wise Command area map of the projects

## **2. Irrigation Billing and Performance of the Irrigation Projects**

To create GIS database of entire influence area (command area plus peripheral area benefitted from the project) by aerial survey with 2 cm (or lesser) resolution which shall be useful for all irrigation management activities. It shall comprise of following datasets superimposed on a GIS base map and used in combination

- i. Project data base along with distribution network (with structures) hierarchy with project layout (parent-child relationship) in GIS and tabular format
- ii. Farmers data base of right of records (ownership)
- iii. Data of cadastral maps integrated with above datasets
- iv. To identify the crops in each land parcel (Gut/Pot-Hissa) of each individual farmer or farmer of WUA
- v. Data of cropping pattern for current season by crop identification
- vi. Data of LIS permissions and WUAs
- vii. Irrigated area delineated with geographical boundaries and with various layers of gut boundaries, crops in current (surveyed) season, ownership of farmers along with measurements and source of water such as canal lift, canal flow, reservoir lift, river lift, wells in command etc.
- viii. To measure irrigated cropped area for each crop and gut so as to prepare 'Mojani antiahwal' and assessment sheets.
- ix. To create a baseline crop area measurement for reference in next years for assessment of irrigation cess
- x. Village wise ortho-mosaic images superimpose with crop type, cadastral information
- xi. To measure projects wise irrigation
- xii. To measure canal wise irrigation
- xiii. Irrigated and non-irrigated area in the command area for measuring performance of the irrigation projects

### **3. Illegal Source of Irrigation and Encroachment**

High resolution remotely sensed data gives enormous facility to solve the micro level problems. Drone surveys are useful in obtaining the spatio-temporal coverage on very high resolutions. Therefore, the drone technology based remotely sensed data can be used to identify the illegal source of irrigation such as pumps in the Canal, farming in the riverbeds (encroachment in rivers), unauthorized well in rivers, pumps in the reservoirs/ canals etc. Identify the gaps in the canal network showcasing the break in hydraulic connectivity resulting in irrigation potential not being achieved, identify unauthorized use of water through drone survey, plug the leakage of water due to seepages is to be undertaken by Water Resources Department for initiate immediate action to retrieve these from any illegal encroachment, holding and unauthorized use. The few objectives that can be identified are:

- i. Mark the illegal source of Irrigation from Canal
- ii. Mark the illegal source of Irrigation from Reservoir
- iii. Mark the illegal source of Irrigation from River
- iv. Mark the gaps in canal network
- v. Identify and mark the leakages in the canal network
- vi. Mark the encroachment into the River, Reservoirs WRD land and colonies.

### **4. Water quality monitoring**

Water form catchment with various land uses are often perceived as having less desirable quality. Water pollution can only be controlled by managing the activities in the catchment area of the reservoirs. Aquatic weeds are floated on many reservoirs in the state. Climatic and water conditions are the main determinant factors for the growth and expansion of water weeds. The weed has substantial negative impacts on hydrology. To monitor the growth of the weed required aerial survey of the Dam / reservoirs. Drone surveys could monitor water bodies. Remote sensing imageries can be used to measure the qualitative parameters of water bodies such as turbidity, water temperature (WT), pollutants, floating materials, weeds etc.

- i. To map the water surface and aquatic weeds on the Dam water surface
- ii. To map the water turbidity
- iii. To assess dam environment health
- iv. To Monitor the expansion of the vegetation in the Dam over the period.

### **5. Tourism Planning**

Dams and their surrounding **environment** naturally provide for a scenic tourism venue. However, considering the location constraints and the land available with WRD, tourism activities would be feasible at select locations only. To enable this tourism planning, Drone survey can be helpful for mapping of such location, generate 3D views and available facilities which can further put online for promotion of tourism. There are

many tourism spots come under Maharashtra Water Resources Department territory. This dam needs to be mapped in 3D visualization. Services, facilities, transportations etc. may be provided on the website, so water tourism can increase. This can be a revenue generating activity for WRD. Further, monitoring of the activities, adherence to safety measures, encroachment etc., can be a few activities that drone survey can be useful for.

- i. To map all WRD tourist location
- ii. To create virtual tourism of the WRD
- iii. To create an immersive 3D maps of famous landmark
- iv. To create 3D videos of facility centres
- v. To monitor the tourism activities, safety measures, compliances, and encroachments
- vi. To prepare road network in the Command area and tourist location

## **6. Post Disaster mapping and planning of mitigation measures**

For WRD, floods are a major disaster which occur frequently in rainy/cloudy season in the state. The Drone survey is quite useful in the post disaster mapping because of the less conveyance time required and ability to survey during cloudy weather conditions. The applications can be:

- i. To prepare risk zone maps
- ii. Mapping the extent of disasters
- iii. Pre-post disaster mapping and identify damages
- iv. Damage mapping for insurance industries
- v. Awareness for emergency response
- vi. Planning for search and rescue operations

## **7. Catchment area management**

Regional scale planning involves greater area coverage with more data requirement. Amalgamation of remote sensing data with GIS results in large scale planning with efficient and cost-effective manner. The satellite data can be used effectively for Digital Elevation Model Development. These techniques can determine the actual flow direction and accumulation pattern over the entire catchment area which can be modelled for watershed delineation and Stream Network Analysis in an automated way. For capturing specific details and high-resolution imagery, drones can be used and are feasible for smaller areas. The generated watersheds / sub-watersheds are prioritized based on their degradation of natural resources. The degradation process can be reversed with proper planning and management of watersheds. Furthermore, potential sites for implementation of conservation measures can also be evaluated.

Rivers in the region carried eroded materials and sedimented into the reservoir which causes into silting and decrease the live storages of the reservoirs. Water resources

Department is expected to apply catchment area conservation strategy for minimize the erosion in the catchment area of the reservoir. This would require demarcation of the catchment area, protect and prevent the erosion, restore the degradation of the land and optimize the availability of water resources.

- i. To map the catchment area of the reservoirs
- ii. To measure the soil erosion in the catchment area
- iii. To monitor the catchment area activities through Aerial survey
- iv. To prepare catchment area conservation reports

## **B. Additional objectives of the Drone survey in Water Resource Department**

### **1. Project Progress Monitoring**

Drone surveys can be used for evidence-based project progress monitoring system. The data can then be integrated with GIS for location specific, site specific and work specific services. The GIS tag & geometry enabled video & report data regarding project information and relevant documents can be stored at a central location to be accessed through internet. This can help in monitoring physical and financial progress with geo-tagged photographs and videos directly from the site. This can further be integrated with Drone videos, and mobile videos footage for surveillance and monitoring. Mobile apps can be used to collect field data, provide intelligence dashboards for decision making, analysis, notifications, and generation of reports directly through the system.

The system shall provide convenient and smart way of site supervision and management. The system results in better operation, planning and effective on-site adjustments. In order to automate the process and provide real time information about work monitoring progress of ongoing works to higher management and other stakeholders, it is decided to design and develop Works monitoring System based on the input provided by Drone survey.

Few objectives that can be identified under this application are:

- i. Pre-planning, comprehensive surveying, 3D mapping, construction process monitoring, quality monitoring, safety inspections
- ii. Routine surveying for tracking development
- iii. Real-time quality monitoring
- iv. Identify the gaps in the canal network showcasing the break in hydraulic connectivity.
- v. 3D Modelling of Project site and assets to measure actual work done through LiDAR and/or drone survey
- vi. Visual documentation of site throughout the project life cycle
- vii. Evidence based tracking through Geotagged Photo & Video
- viii. Photo & Video based Comparisons
- ix. BIM & CAD based features

## **2. Dam safety and inspection**

Dams are critical infrastructure for multi-purpose uses such as irrigation, power generation, flood moderation and supply of water for drinking and industrial purposes, which are constructed with large investments. Safety of the dams is a very important aspect which must be given priority on a continuous basis for safeguarding the national investment and the benefits derived by the nation from the projects. Safety inspection of dams can be conducted at periodic intervals, pre-monsoon, post-monsoon and after any extreme event, such as a large flood or an earthquake. The drone survey is useful in inspection of Dam in post monsoon or in flood time where cloud cover possibilities are high and the requirement of details during inspection is critical.

The dams require regular inspection and maintenance. Therefore, Dam safety and inspection can be done through advance technology. Based on aerial and underwater survey, Gate inspection, preparation of health report, instrumentation data reports and taking actions for the compliance of reports need to be generate. The following objectives can find applicability with drones:

- i. To survey the safety measurement of the Dam
- ii. To inspect upstream wall side of the reservoirs
- iii. To inspect hydro-electric dams with underwater Drones
- iv. To inspect the intake Gate using Underwater Drones
- v. To inspect the hydro dam intake Gate using Underwater Drones
- vi. To inspect under water tunnel for general tunnel condition, deformation inspection, detection of cracking, displacement or separation in tunnel lining

## **3. 3D mapping of important assets**

3D map provides realistic picture of the objects in three dimensions, length, width, height for visualization and information gathering. It provides realistic view, blueprint of an object. This would be utilized for vulnerability evaluation by WRD Engineers. 3D maps visualize floor plans and identify possible obstructions which may occur during construction. 3D mapping is a vision which provides the curvature of Earth hinder view and zoom in close to location. 3D profiling of an area or object can be generated using a pair of a stereo camera, overlapping of aerial survey images.

- i. To create a 3D framework of the Dam / Asset for Geometric recreation
- ii. To create 3D model of the Gate / Dam line
- iii. Vulnerability evaluation of the dam
- iv. Static and dynamic analyses of the Dam

## 1.2 Pre-Qualification of the Bidder

### 1) Pre-Qualification Criteria

PQ#	Pre-qualification Requirements	Documents to be submitted
PQ 1	The sole Bidder or each of the consortium partners, in case of the consortium, must be registered Company, under Companies Act 1956/ 2013 since last 5 years, as on last date of submission.	Certificate of Incorporation/Registration
PQ 2	The sole Bidder or any of the consortium partners, in case of the consortium, must have minimum average annual turnover of INR 100 Crore from last three financial years.	Copy of financial audited balance sheets certified by statutory auditor/chartered accountant & CA Certificate clearly citing the average turnover for last 3 financial years
PQ 3	The sole Bidder or each of the consortium partners, in case of the consortium, must have Positive net worth as of 31 <sup>st</sup> March 2021.	A copy of the CA certificate must be enclosed the Profit /loss statement.
PQ 4	<p>The sole Bidder or any of the consortium partners, in case of the consortium, must have been engaged in implementing at least one (01) similar project of value above Rs. 25 Cr. involving services to Govt / PSUs in India during the last three financial years</p> <p><b>Similar Project:</b> Similar projects shall comprise of the Geospatial Technology based data preparation that shall include <b>any one of</b> the following components:</p> <ul style="list-style-type: none"> <li>i. GIS Data preparation on Satellite images / Aerial Survey / Drone Survey, Data conversion, data modelling.</li> <li>ii. Creation of Multiple Geo-Spatial Layers (Asset mapping, 3D mapping, Catchment area, Disaster mapping) based on Drone survey / Aerial survey / Satellite images / Ground verification / Physical survey.</li> <li>iii. Drone survey / underwater drone survey for collection of images / videos.</li> </ul>	<ul style="list-style-type: none"> <li>— Copy of Work Order</li> <li>— Copy of Completion Certificate issued by client</li> <li>Or</li> <li>— Letter from Client- In case of ongoing projects.</li> </ul>

*Appointment of agency for undertaking Geospatial technological activities*

	iv. GPS based data acquisition / ground verification.	
PQ 5	The sole Bidder or any of the consortium partners, in case of the consortium, must have a team of at least 50 employees on its rolls as on last date of submission	Certificate from Head (HR) or company secretary for number of technical qualified professionals employed by the company
PQ 6	The sole Bidder or any of the consortium partners, in case of the consortium, must have office in Maharashtra as on last date of submission.	Copy of the Shop Act or leave License Agreement, if any, should be uploaded/attached. Lease or Rental Agreement, Sale Deed or Utility Bill in the name of the company, or Declaration that the office will be set-up within a period of 30 days from the date of issuance of Letter of Intent
PQ 7	The sole Bidder or each of the consortium partners, in case of the consortium, must not have been blacklisted by any Central/State Government Organization or Department in India at the time of submission of the bid for fraudulent or corrupt practices.	An Affidavit on INR 500 non-judicial stamp paper signed by the Authorized Signatory of the Bidder. Annexure -9
PQ 8	The sole Bidder or any of the consortium partners, in case of the consortium, must possess CMMI level 5 certification for both development and services and PCMI level 5 as on the date of bid submission.	Valid CMMI and PCMI Certificate as on date of bid submission issued by authorized partner of CMMI institute. The Bidders name should reflect on the CMMI website's appraised results ( <a href="https://sas.cmmiinstitute.com/pars/pars.aspx">https://sas.cmmiinstitute.com/pars/pars.aspx</a> )

**Note:**

- A) All the scanned copies of certificates / documents attached with the tender should be stamped and signed by authorized person of the Bidder otherwise the tender is liable to be treated as INVALID. Also, all the documents on stamp papers should be invariably duly attested by Notary Public otherwise the tender is liable to be treated as INVALID. Also need to produce original certificates / documents during scrutiny stage, if asked by concerned Tendering nodal department.
- B) In case, Bidder has misrepresented or submitted any fraudulent information, samples, etc. regarding qualification criteria, the bid of the corresponding bidder would be rejected and the **< Name of Organization calling for tender>>**, Water Resources Department, Government of Maharashtra would Blacklist the Bidder. EMD of that bidder shall be forfeited and necessary legal actions shall be initiated against such bidder.

## **2) Consortium**

Bids submitted by a Consortium shall comply with the following requirements: -

- a) Maximum 2 partners shall be allowed in the Consortium, including Lead partner.
- b) The Lead bidder shall be liable for the entire scope of work and risks involved thereof (the liability should be for the entire value of the contract)
- c) The Lead bidder should provide the roles and responsibility of each member
- d) The Lead bidder shall ensure that all the members are part of the contractual arrangement between themselves before submitting the bid.
- e) All members of the consortium shall be jointly and severally liable.

### **1.3 Instruction to Bidder**

#### **1) Advice to the Bidders**

Bidders are advised to study this RFP document carefully before participating. It shall be deemed that submission of Bid by the Bidder has been done after its careful study and examination of the RFP document with full understanding to its implications. Bid is to be submitted in prescribed format only with necessary certificates, brochures & documents asked for in the RFP document (Format enclosed in annexures).

#### **2) Tender Form and Tender Fee**

The tender document can be downloaded from the e-tendering portal [www.mahatenders.gov.in](http://www.mahatenders.gov.in). The tender fee of **Rs. 5000** shall have to be paid through an online payment gateway available at the e-tendering portal. The tender fee shall be non-refundable. Proof of Tender form fee payment shall be provided by the Bidder.

#### **3) Earnest Money Deposit (EMD)**

- a) While submitting duly filled tender document through <https://mahatenders.gov.in>. Bidder needs to pay E.M.D. of **INR 50,000 (Rupees Fifty Thousand only)** online and EMD to be furnished in Indian Rupees only.
- b) Bidders shall provide the proof of EMD payment.
- c) EMD is to be obtained from the bidders except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department

- d) Valid Certificate issued to the bidder to be produced that they are registered either with Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department.
- e) EMD of all non-responsive bids shall be returned to the bidders automatically only after the letter to commence the work is given to successful bidder or on cancellation of tender by WRD.
- f) The EMD amount is interest free and will be refundable to the unsuccessful Bidders without any accrued interest on it.
- g) Bidders shall ensure that the payment of the EMD is made prior to the last date of Bid Submission of the Tender Schedule considering Bank's clearing process lead time, holidays, etc.
- h) The EMD may be forfeited in the event of:
  - i. A Bidder withdrawing its bid during the period of bid validity
  - ii. A successful Bidder fails to sign the subsequent contract in accordance with this RFP
  - iii. The Bidder being found to have indulged in any suppression of facts, furnishing of fraudulent statement, misconduct, or other dishonest or other ethically improper activity, in relation to this RFP
  - iv. A Proposal contains deviations (except when provided in conformity with the RFP) conditional offers and partial offers
- f) EMD shall be refunded to the successful bidder on receipt of Performance Bank Guarantee.

#### **4) GST and PAN**

The Bidder shall ensure that they have a valid GST number as on last date of submission. Copy of GST registration certificate signed by bidder's authorized signatory shall provide by the Bidder in the bid response.

The bidder shall also ensure that they have a valid PAN number as on last date of bid submission and copy of PAN registration certificate signed by bidder's authorized signatory shall provide by the Bidder in the bid response.

#### **5) Clarification – Check existing project documents physically**

Before responding to RFP, the Bidder may visit the office of the [Executive Engineer, Division Name and Address] with prior appointment and satisfy themselves as to the condition's prevalent technical requirements, applicable laws and regulations, and any

other matter considered relevant for them. No financial claims for such site visits and for collection of information shall be reimbursable.

## **6) Submission of Bids**

- A. Tender Documents are to be prepared & submitted online as per instructions of e-tendering and to be uploaded on web site, digitally signed wherever necessary. The detailed step by step procedure for uploading the Tender Documents, required Tender papers, Payment of tender fee, and EMD through e-payment Gateway is available on the e-Tendering portal of Govt. of Maharashtra <https://mahatenders.gov.in>. Bidders have to follow the instructions given on the above web site for filling up Tender Forms online.
- B. **All the pages of the Proposal document must be sequentially numbered and must contain the list of contents with page numbers.** Any deficiency in the documentation may result in the rejection of the Bidder's Proposal.
- C. Bidders shall submit their quote including taxes applicable as on date of submission of bid.
- D. The proposal as mentioned shall be submitted in two parts. Each part shall include the following information:

<b>Parts</b>	<b>Instructions</b>
<b>Part 1: Technica 1 Bid</b>	<p><b>This should not contain any financial offer, in either explicit or implicit form, in which case the bid will be rejected.</b></p> <p>This should contain</p> <ul style="list-style-type: none"><li>• Tender Fee: Receipt of Tender fee from e-tender site</li><li>• EMD: Receipt of Earnest Money Deposit from e-tender site or MSME certificate</li></ul> <p>Other details along with EMD:</p> <ul style="list-style-type: none"><li>• Registration certificate under the Indian Company's Act 1956</li><li>• A partnership deed duly registered under the Partnership Act</li><li>• <b>Consortium proforma</b></li><li>• <b>CMMI and PCMM certification</b></li><li>• The Power of Attorney executed on a non-judicial stamp paper of INR 500 (five Hundred) duly notarized by a notary. (Annexure -10)</li><li>• Copies of GST and PAN registration</li><li>• <b>INR 500 non-judicial stamp paper signed by the Authorized Signatory of the Bidder</b> for being not debarred/ blacklisted by any Government/PSU in India for deficiency of Services as on date of submission of the Bid – (Annexure - 9)</li><li>• Annexure – 6.</li></ul>

	<p><b>Technical Proposal:</b></p> <ul style="list-style-type: none"> <li>• <b>Section 1</b> <ul style="list-style-type: none"> <li>i. Executive summary</li> <li>ii. Covering letter as prescribed in RFP Bid Form – (Annexure - 1)</li> <li>iii. Details of the Bidder as prescribed in (Annexure - 2)</li> </ul> </li> <li>• <b>Section 2</b> <ul style="list-style-type: none"> <li>i. Information and Track record (Project Citation Format) of bidder as prescribed in (Annexure - 4) and (Annexure-6)</li> <li>ii. Project team structure in (Annexure - 7)</li> <li>iii. Curriculum Vitae (CV) of Key Personnel in (Annexure - 8)</li> </ul> </li> <li>• <b>Section 3</b> <ul style="list-style-type: none"> <li>i. Proposed work plan in (Annexure - 5) and the SLA management plan</li> </ul> </li> <li>• <b>Section 4</b> <ul style="list-style-type: none"> <li>i. Turnover and Net-Worth Certification in (Annexure - 3)</li> <li>ii. Undertakings (Annexure -11)</li> </ul> </li> <li>• <b>Section 5</b> <ul style="list-style-type: none"> <li>i. Other Information</li> </ul> </li> </ul> <p>Further information may be provided as additional appendices. However, they shall be properly labelled and cross-referenced in the main body of the proposal.</p>
<b>Part 2: Financial Bid</b>	<p>The financial proposal should be submitted with</p> <ul style="list-style-type: none"> <li>a. Financial Proposal Cover Letter in (Annexure - 12)</li> <li>b. In the prescribed format of BOQ in (Annexure - 13)</li> <li>c. In the prescribed format of Additional Works rate card as per (Annexure - 14)</li> </ul> <p>All the pages in the financial response should be on the letterhead of the Bidder with a seal and signature of the authorized signatory of the Bidder. The copy shall be Digitally signed by the authorized signatory on all the pages before uploading online.</p> <p>Prices quoted by the Bidder shall be final (inclusive of all taxes, duties, insurance, license fee and other costs). No variation in prices on account of increase / decrease in input cost will be allowed under any circumstances during the entire period of project. GST on quoted prise shall be paid separately.</p>

## 7) Method of Submission of Bids

The two bids system shall be followed. Technical and Financial Bids shall be uploaded separately through the e-Tendering system

**8) Late submission of Bids**

Late submission will not be entertained and will not be permitted by the e-Tendering system.

**9) Proposal Preparation Costs**

The Bidder shall bear all costs associated with the preparation and submission of its bid and **<< Name of Organization calling for tender>>** and/or Water Resources Department shall in no event or circumstance be held responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

**10) Bidder's Authorized Signatory**

A Proposal should be accompanied by an appropriate board resolution or power of attorney in the name of an authorized signatory of the Bidder stating that he is authorized to execute documents and to undertake any activity associated with the Bidder's Proposal. A copy of the same should be uploaded under the relevant section / folder on the e-Tender portal. Furthermore, the bid must be submitted online after being digitally signed by an authorized representative of the bidding entity.

The bidder must submit the power of attorney to specify an individual who will be authorized for legal and financial matters.

The Power of Attorney should be executed on a non-judicial stamp paper of INR 500 (five Hundred) and duly notarized by a notary public. Annexure -10

In case of Consortium, other partner shall authorize Power of Attorney to the Lead Bidder.

**11) Validation of interlineations in Bid**

Any interlineations, erasures, alterations, additions or overwriting shall be valid only if the person or persons signing the bid have authenticated the same with signature.

**12) Language**

The Proposal should be filled by the Bidder in **English** language only. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the Bidders. For purposes of Proposal evaluation, the English translation shall govern.

**13) Venue and Deadline for submission of proposal**

The response to RFPs must be submitted on the [www.mahatenders.gov.in](http://www.mahatenders.gov.in) by the date and time specified for the RFP.

#### **14) Visit to WRD premises**

Bidders are encouraged to submit their respective Proposals after visiting the **<< Name of Organization calling for tender>>** office and ascertaining for themselves available software, methods, data storage facilities, constraints, availability of networks and other data with WRD, applicable Laws and regulations or any other matter considered relevant by them.

It shall be deemed that by submitting a Bid, the Bidder has:

- a. Made a complete and careful examination of the Bidding documents and the Sites
- b. Received all relevant information as requested to **<< Name of Organization calling for tender>>**, WRD;
- c. Accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the **<< Name of Organization calling for tender>>**, WRD relating to any of the matters referred to above;
- d. Satisfied itself about all matters, things and information including matters referred hereinabove necessary and required for submitting an informed Bid, execution of the Project in accordance with the RFP and performance of all its obligations thereunder;
- e. Acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the RFP or ignorance of any of the matters referred to hereinabove shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. From **<< Name of Organization calling for tender>>**, WRD
- f. Acknowledged that it does not have a Conflict of Interest; and agreed to be bound by the undertakings provided by it under and in terms hereof.

WRD shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP, or the Bidding Process, including any error or mistake therein or in any information or data given by them.

#### **15) Verification and Disqualification**

**<< Name of Organization calling for tender>>**, WRD reserves the right to verify all statements, information and documents submitted by the Bidder in response to this RFP or the Bidding Documents and the Bidder shall, as and when required by **<< Name of Organization calling for tender>>**, WRD, make available all such information, evidence and documents which may be necessary for such verification. Any such verification, or absence of such verification, by **<< Name of Organization calling for tender>>**, WRD shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of **<< Name of Organization calling for tender>>**, WRD thereunder.

**<< Name of Organization calling for tender>>**, WRD reserves the right to reject any Bid and forfeit the Bid Security if:

- a. At any time, a material misrepresentation is made or uncovered, or
- b. The Bidder does not provide, within the time specified by WRD, the supplemental information sought by **<< Name of Organization calling for tender>>**, WRD for evaluation of the Bid.

Such misrepresentation / improper response shall lead to the disqualification of the Bidder. If such disqualification / rejection occurs after the Bids have been opened and the Highest Bidder gets disqualified / rejected, **<< Name of Organization calling for tender>>**, WRD reserves the right to take appropriate action and select the Bidder as per Government procedure

#### **16) Modifications / Substitution / Withdrawal of Bids**

No bid can be modified by the Bidder, subsequent to the closing date and time for submission of bid. If date of submission is extended due to some reasons, modification in bids is possible till extended period provided bid has not been opened.

Withdrawal of Bid is not permissible after its submission. If the bid is withdrawn before the validity period, the EMD will stand forfeited.

#### **17) Incomplete Bids**

Initial scrutiny of the Bid responses shall be done and if in case of any Bidders submitting incomplete Bids as per the criteria mentioned below shall be treated as non-responsive:

- Bid response not submitted as per the format specified in the RFP document
- Bid response received without the Letter of Authorization / Power of Attorneys
- Bid response found to suppress the details
- Bid response submitted with incomplete information / illegible documents, subjective, conditional and / or partial offer is submitted
- Bid response submitted without the documents requested in the checklist
- Bid response non-compliant with any of the clauses stipulated in the RFP
- Bid response with lesser validity period than as stipulated
- Bid response submitted without tender fee and EMD

#### **18) Evaluation Process**

- a) **<< Name of Organization calling for tender>>**, WRD shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability of a Bidder to submit requisite supporting documents / documentary evidence within a reasonable time provided to it, may lead to the Bidder's Proposal being declared non-responsive
- b) The decision of **<< Name of Organization calling for tender>>**, WRD in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation / discussion with WRD.
- c) **<< Name of Organization calling for tender>>**, WRD may ask for meetings with the Bidders to seek clarifications on their proposals

- d) **<< Name of Organization calling for tender>>**, WRD reserves the right to reject any or all Proposals based on any deviations contained in them
- e) Each of the responses shall be evaluated as per the criterions and requirements specified in this RFP

## 19) Bid Opening

Bids will be opened in 2 stages:

**Stage 1** – In the first stage Technical Bids (Envelope 1) will be opened in office of **Executive Engineer, [Division Name and Address]** in the presence of the Bidder's representatives who may be present at the time of opening.

**Stage 2** – In the second stage Financial Bids (Envelope 2) will be opened in office of **Executive Engineer, [Division Name and Address]** in the presence of the Bidder's representatives who may be present at the time of opening.

## 20) Bid Validity

The offer submitted by the Bidders should be valid for minimum period of 90 days from the date of submission of the Bid. On completion of the validity period, unless the Bidder withdraws his bid in writing, bid validity shall be deemed to be extended until such time that the contract is awarded to successful Bidder or Bidder formally (in writing) withdraws his bid.

## 21) Bid Evaluation

- 1 Initial Proposal scrutiny will be held to confirm that Proposals do not suffer from the infirmities detailed below. Proposals will be treated as non-responsive, if a Proposal is found to have been
  - a) Submitted in manner not conforming with the manner specified in the RFP document
  - b) Submitted without appropriate EMD as prescribed herein
  - c) Received without the appropriate or power of attorney
  - d) Containing subjective / incomplete information
  - e) Submitted without the documents requested in the checklist
  - f) Non-compliant with any of the clauses stipulated in the RFP
  - g) Having lesser than the prescribed validity period.

The EMD of all non-responsive bids shall be returned to the bidders automatically only after the letter to commence the work is given to successful bidder or on cancellation of tender by **<< Name of Organization calling for tender>>**, WRD.

- 2 All responsive Bids will be considered for further processing as below:

**<< Name of Organization calling for tender>>**, WRD will prepare a list of responsive Bidders, who comply with all the prerequisites and Terms and Conditions of the Bid (Tender). All eligible bids will be considered for further evaluation by **<< Name of Organization calling for tender>>**, WRD according to the Evaluation process defined in

this RFP document. The decision of the **<< Name of Organization calling for tender>>**, WRD will be final in this regard.

## **22) Seek Clarifications**

Bidders are requested to submit their queries on the company letter head, in the below mentioned format only: on or before **xx/xx/yyyy, Time: 15:00 PM** via seek clarification option at [www.mahatenders.gov.in](http://www.mahatenders.gov.in) only. The queries should be necessarily submitted in the following format in spreadsheet software.

Name of Bidder					
Department Name		<b>&lt;&lt; Name of Organization calling for tender&gt;&gt;</b> , WRD, Government of Maharashtra			
Tender Ref. No		xxxxxx/xxxxxx/xx/xxxxx			
Tender Name		“Appointment of agency for undertaking Geospatial technological activities for various works”			
Tender Due Date					
#	RFP Page No.	RFP Clause No.	Clause Title	Queries / Clarification Sought	Justification by Bidder
..		..	..	..	..

The queries not adhering to the above-mentioned format shall not be responded to.

## **23) Amendment of RFP Document**

At any time before the deadline for submission of bids, employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by amending, modifying and / or supplementing the same.

The amendments shall be published on website (<https://mahatenders.gov.in>). Prospective Bidders are advised to periodically browse this website to find out any further corrigendum / addendum / notice published with respect to this tender.

In the event of any amendment, employer reserves the right to extend the deadline for the submission of the bids, in order to allow prospective Bidders reasonable time in which to take the amendment into account while preparing their bids.

## **24) Technical Bids**

The Technical bids shall be complete in all respect and contain all information and documents asked for, except prices. It must not contain any price information.

During the activity of Bid Preparation, the Bidder is required to upload all the documents of the technical bid by scanning the documents and uploading it in the PDF format. This activity of uploading the documents as well as preparation of financial bid and other Annexures enclosed with the tender (if any) should be completed within the pre-scribed schedule given for bid preparation.

After Bid Preparation, the tenderer is required to complete Bid Submission activity within pre-scribed schedule without which the tender will not be submitted.

## **25) Financial Bids**

Bidder shall submit their financial bid only in the e-Tendering system. Price quoted elsewhere shall be liable to rejection.

## **26) Qualifying Criteria**

Prior to the detailed evaluation of the Technical Bids, the **<< Name of Organization calling for tender>>**, WRD Shall determine whether each bid is complete, is accompanied by the required information and documents and is substantially responsive to the requirements set forth in the RFP document. Without submission of the required documents, the bidder shall not eligible for pre-qualification. Only those Bidders, who fulfil all the qualifications mentioned in the section I “**Pre – Qualification Criteria**” of the tender, shall be eligible and qualified for further technical scrutiny.

### **Process of evaluation the Tender**

- i. Required information and Documentation (Company registration, Tender Fees, EMD / MSME, PAN, GST, Power of Attorney etc.)
- ii. Pre-Qualification (As mentioned in Section I)
- iii. Technical Qualification (As mentioned in Section I)
- iv. Financial Bid evaluation

The employer may at its sole discretion, waive any minor informality or non-conformity or irregularity in a Bid Document, which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Bidder.

## **27) Technical Evaluation Criteria**

The evaluation of the technical bids will be done by employer. Technical evaluation conducted by the employer shall be final and binding on all the Bidders. Each Technical Proposal shall be assigned a technical score out of a maximum of 100 points.

Bidders who have qualified as per the Pre-Qualification Criteria of this RFP document shall be evaluated and scored by the RFP Evaluation Committee based on a weighted point system, assessing each Bidder's ability to satisfy the requirements set forth in the RFP Document.

The criteria for the technical evaluation are as follows:

TQ#	Technical Evaluation Criteria	Points
<b>TQ 1</b>	<b>Average Annual Turnover during the last three financial years</b>	<b>15</b>
	Equal to or more than Rs 200 Crores	15
	Equal to or more than Rs 150 Crores but less than 200 Crores	12
	Equal to or more than Rs 100 Crores but less than 150 Crores	10

<b>TQ 2</b>	<b>Relevant Experience</b>	<b>75</b>
2.1	The Bidder should have been engaged in implementing at least one (01) similar project of value above Rs. 25 Crores involving services to Govt / PSUs in India during the last three financial years	25
	Project value equal to or more than Rs. 75 Crores	25
	Project value equal to or more than Rs. 50 Crores but less than Rs.75 Crores	20
	Project value equal to or more than Rs. 25 Crores but less than Rs.50 Crores	15
2.2	The bidder should have performed Drone survey and / or GIS mapping including field survey in India for Govt/semi Govt, /ULB/Public undertaking project of minimum 25,000 Ha. during the last three financial years	25
	Project area equal to or more than 75,000 Ha.	25
	Project area equal to or more than 50,000 Ha but less than 75000 Ha.	20
	Project area equal to or more than 25,000 Ha but less than 50,000 Ha	15
2.3	The Bidder must have a team of at least 50 employees on its rolls as on last date of submission	25
	Employees equal to or more than 150	25
	Employees equal to or more than 100 but less than 150	20
	Employees equal to or more than 50 but less than 100	15
<b>TQ 3</b>	<b>Presentation</b>	<b>10</b>
<b>Total</b>		<b>100</b>

Note: - **Bidders will have to score more than or equal to 70% marks** in the technical evaluation to qualify for the commercial bid opening. Others scoring below 70% deemed to be dis-qualified in technical evaluation.

## 28) Financial Bid Evaluation

- Commercial envelope of only those bidders who has obtained minimum 70% score in Technical Evaluation shall be opened by the **<< Name of Organization calling for tender>>**, Water Resources Department.
- The Water Resources Department shall determine whether the commercial bids are complete i.e. whether the Bidder has included all components as per RFP.
- In case of discrepancy between the prices quoted in words and in figures, the prices quoted in words shall be considered. For any other calculation/ summation error etc. the bid may be rejected.
- In the event of two or more Bidders securing exactly the same commercial quote, then Water Resources Department reserves the right to:

- Declare that bidder as L1 whose technical score is highest, among the bidders who have secured exactly the same commercial quote Or
- In the event of bidders securing exactly same technical score, the bidder with the highest project value of relevant work experience as per TQ 2.1 of Technical Evaluation Criteria.,
- The decision of **<< Name of Organization calling for tender>>**, Resources Department shall be final in this regard and the bid will be rejected if the bidder does not agree to the decision in this regard.

## **29) Award Criteria**

- 1) Method of evaluation of selection of successful Bidder and award of Contract to Bidder shall be based on Cost Based Selection (L1) after successful Technical Qualification.
- 2) The Bidder with the lowest quote offered shall be considered as successful bidder, with the Water Resources Department for undertaking Geospatial technological activities

## **30) Notification of Award**

Prior to the expiration of the period of bid validity, the **<< Name of Organization calling for tender>>**, Water Resources Department will notify the successful Bidder that its bid has been accepted. The notification of appointment will constitute the formation of the Contract. Upon the successful Bidder's furnishing of Performance Bank Guarantee, the Water Resources Department may notify each unsuccessful Bidder & return their EMD.

## **31) Signing of Contract**

At the same time as the Employer notifies the successful Bidder that its bid has been accepted, the Employer shall send the Bidder the Pro forma for Contract, incorporating all agreements between the parties.

Within 15 working days of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to the Employer.

The rates in Work Order will be valid from the date of the issue of Work Order till the completion of the work. No representation in this regard will be entertained.

## **32) Issuance of work order**

**<< Name of Organization calling for tender>>**, WRD shall issue the work order within 7 days of signing the contract. In case, the successful L1 bidder **does** not fulfill the work / not sign the contract / not accepted the contract, in this case, employer may ask the L2 bidder to match the L1 prices and award the contract to the L2 bidder. In case the L2 bidder is not willing to match the price, **<< Name of Organization calling for tender>>**, WRRD will approach L3 bidder, and so and so forth. The **<< Name of Organization calling for tender>>**, WRD may after 3 attempts choose to scrap the tender at its discretion.

### **33) Confidentiality of the Document**

This Tender Document is confidential, and the Bidder shall ensure that anything contained in this tender document shall not be disclosed in any manner, whatsoever.

### **34) Post Signing of Contract**

Successful Bidder during project duration may have to visit **<< Name of Organization calling for tender>>**, WRD Office located at **[Location name]** multiple times at its own cost. Even whenever needed by WRD department officers the successful bidder must visit WRD Office located at **[location name]** at its own cost.

### **35) Tender Related Conditions**

The Bidder should confirm unconditional acceptance of full responsibility of completion of work and for executing the 'Scope of Work' of this RFP. This confirmation should be submitted as part of the Technical Bid. The Bidder shall also be the sole point of contact for all purposes of the Contract.

The Bidder should not be involved in any litigation that may have an impact of affecting or compromising the delivery of services as required under this contract. If at any stage of Tendering process or during the currency of the Contract, any suppression / falsification of such information is brought to the knowledge of the employer, the employer shall have the right to reject the bid or terminate the contract without any compensation to the Bidder.

The Bidder shall mandatorily submit the undertaking mentioned in the Section IV. (Annexure 11)

### **36) Rejection Criteria**

Besides other conditions and terms highlighted in the tender document, bids may be rejected under following circumstances:

#### **a. General Rejection Criteria**

- Bids received through Telex / Telegraphic / Fax / E-Mail except wherever required
- Bids which do not confirm unconditional validity of the bid as prescribed in the Tender
- If the information provided by the Bidder is found to be incorrect / misleading at any stage / time during the Tendering Process
- Any effort on the part of a Bidder to influence the employer's bid evaluation, bid comparison or contract award decisions
- Bids received by the employer after the last date for receipt of bids prescribed by the employer
- Does not include requisite documents
- Bids without signature of person (s) duly authorized on required pages of the bid
- Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidder.

**b. Technical Rejection Criteria**

- Technical Bid containing financial details.
- Revelation of Prices in any form or by any reason before opening the Financial Bid
- Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect
- Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidder
- Bidders not complying with the Technical and General Terms and conditions as stated in the Tender Documents
- The Bidder not confirming unconditional acceptance of full responsibility of providing services if the bid does not conform to the timelines indicated in the bid.

**c. Financial Rejection Criteria**

- Incomplete Price Bid
- If a firm quotes NIL charges / consideration, the bid shall be treated as unresponsive and will not be considered.
- Price Bids that do not conform to the Tender's price bid format.
- Total price quoted by the Bidder does not include all statutory taxes and levies applicable.
- If there is an arithmetic discrepancy in the financial bid calculations the employer shall rectify the same. If the Bidder does not accept the correction of the errors, its bid may be rejected.

**37) Right of Water Resources Department**

The Water Resources Department may terminate this bidding process at any time without assigning any reason and upon such termination, the Water Resources Department shall not be responsible for any direct or indirect loss or damage arising out of such a termination.

Further, the Water Resources Department reserves the right to amend /edit /add /delete any clause of this Bid Document. This will be informed to all and will become part of the bid /RFP and information for the same would be published on the e-Tendering portal. The decision of the Water Resources Department in selecting the agency who qualifies through this bidding process shall be final and shall be binding on all Bidders.

## **Section - II SCOPE OF WORK**

## **2.1 Scope of Work**

### **1) Overview**

Water Resources Department seeks the services of reputed, well established and financially sound Agencies for providing Geospatial activities for various WRD activities such as construction management, administrative management & irrigation management. This document provides information to enable the Bidders to understand the broad requirements to submit their bids.

### **2) Information of work Area**

The project wise information for project location and influence area is mentioned and Bidder shall carefully note for financial bidding. **<<Employer shall fill all the details>>**

<b>Sr. No.</b>	<b>Entity</b>	<b>Details</b>
1	Name of Project	
2	Taluka	
3	District	
4	Contact Details of Executive Engineer Address and Account details	Executive Engineer, [Division Name] Email: - <a href="mailto:email@email.com">email@email.com</a> Phone: - XXXXX- XXXXX Bank Name: - Bank Name, Branch- Branch name Account No: XXXXXX Address: XXXXXX
5	Contact Details of Superintending Engineer & Address	Superintending Engineer, [Circle Name] Email: <a href="mailto:email@email.com">email@email.com</a> Phone: XXXXX-XXXXX Address: XXXXXX
6	Contact Details of Chief Engineer & Address	The Chief Engineer, [Region Name] Email: <a href="mailto:email@email.com">email@email.com</a> Phone: XXXXX-XXXXX Address: XXXXXX
7	Name of Activities	
8	Command Area (Ha)	
9	Influence area to be surveyed (Ha)	
10	Length in Meter (Canal)	
11	Length in Meter (Dam line)	
12	Assets No.	
13	Tourist Development Area (Ha)	
14		
15		

### **3) Methodology**

Aerial / Drone survey shall be done for the influence area of project for collecting / preparing Master GIS database for various Water Resources management operations. All images, videos, vector based digitized GIS maps and textual data will be stored on Cloud provided by WRD and may be retrievable for use for Decision Support System (DSS) through reports, dash boards etc. This master GIS database may be used for cropped area measurement and preparation of assessment sheets and other WRD operations. Videos and images may be used for project progress monitoring. The following methodology may be adopted for preparation of GIS database for the influence area.

#### **I. Data collection**

Selected Bidder shall collect required data for entire influence area from the competent authorities of the Government of Maharashtra.

The bidder shall collect following data for the influence area under scope of bid for the projects

- i. Influence area map of projects.
- ii. Village maps with survey / gut numbers (cadastral maps).
- iii. Maps having administrative boundaries of Tehsil, District etc.
- iv. Command area map of projects.
- v. Delineated map of WUA.
- vi. Details of land acquisition
- vii. Scanning of the Hard copy maps
- viii. Tariff structure
- ix. Farmers data through 7/12 extract.
- x. Old assessment sheets.
- xi. Individual lift irrigation permission
- xii. Data related to project masters, dam masters, WUA masters, NI customer masters
- xiii. Red line / Blue line maps
- xiv. Index maps
- xv. As built drawings of the site
- xvi. Any other relevant data

#### **II. Drone Survey**

Drone survey may be carried out for the entire influence area and Orthomosaic images, videos prepared for preparation of GIS database, progress monitoring and assessment sheet for current (surveyed) season.

- i. The bidder shall obtain all necessary permissions for aerial survey from competent Authority and shall abide by the Civil Aviation Requirements (CAR).
- ii. The bidder shall design flight plan in such a way that the entire influence area is covered.
- iii. Fixing control points by Differential Global Position System (DGPS) instrument in each village of influence area at various locations.

- iv. The bidder shall generate ortho-mosaic images from the raw drone images with reference to the ground control points and DGPS points.
- v. The bidder shall collect images / videos for the project progress monitoring, dam safety measurements etc.
- vi. The bidder shall do Lidar survey for mapping of dam structures in 3D.

### **III. Matching Ortho-mosaic map with adjoining area**

The bidder shall match Orthomosaic map with adjoining influence areas surveyed by other Bidders. The survey boundaries, roads, nallas/rivers, other geographical parameters (all GIS layers) should match with those parameters of ortho-mosaic map created by other Bidders.

### **IV. Video editing**

Selected Bidder shall record video / images of the project's construction sites and the output video shall be

- i. Stabilized video
- ii. Colour corrected
- iii. Audio noise reduction, adding informative soundtrack
- iv. Adding text
- v. Pan and zoom on important features
- vi. Cut/combine/split drone videos
- vii. Edited images and video submission and upload to project progress monitoring application

### **V. Creation of GIS Database, Video, 3D model, Spreadsheets**

Selected Bidder shall create database for the entire influence area using Ortho-Mosaic Drone Images and existing hard copy maps.

#### **A. Asset Mapping**

- i. Conversion of .Kml file into GIS layers
- ii. Command area, Influence area peripheral area map of the projects
- iii. Project wise, WRD office hierarchy wise boundary for section, sub-division, division, circle, region and corporation etc.
- iv. Assets layers with geometry for Dam and Dam line, Waterbodies, River, Kolhapur Type (KT) weir, Lift Irrigation Scheme, Distribution network (open or pipe distribution network), Hydro Electric Projects etc. with relevant attributes.
- v. Various hydro-structures, structures on Canal, PDN, LIS
- vi. WRD owned (acquired) land and buildings, colonies etc.
- vii. Source of water such as canal, open well, tube well, Location of individual lift permission
- viii. Red line / Blue Line

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- ix. Major Roads, Railway etc. in WRD area
- x. Water User Association GIS layer
- xi. Index map for each command area.
- xii. Village wise Command area map of the projects
- xiii. Metadata for all the Geo-spatial database.

**B. Irrigation Billing and Performance of the projects**

- i. Project data base along with distribution network (with structures) hierarchy with project layout (parent-child relationship) in GIS and tabular format
- ii. Farmers data base of right of records (ownership)
- iii. Data of cadastral maps integrated with above datasets
- iv. Crops in each land parcel (Gut/Pot-Hissa) of each individual farmer or farmer of WUA
- v. "Pot-hissa" demarcation of each land and link with farmers database records and assessment data.
- vi. Cropping pattern for current season
- vii. LIS permissions and WUAs
- viii. Ownership of farmers along with measurements and source of water such as canal lift, canal flow, reservoir lift, river lift, wells in command etc.
- ix. Prepare 'Mojani antiahwal' and assessment sheets.
- x. Baseline crop area measurement for reference in next years for assessment of irrigation cess
- xi. Projects wise, gross level, command level, project level, canal level wise irrigated, non- irrigated maps

**C. Illegal source of Irrigation and encroachment**

- i. Illegal source of Irrigation from Canal
- ii. Illegal source of Irrigation from Reservoir
- iii. Illegal source of Irrigation from River
- iv. Encroachment into the River, Reservoirs WRD land, colonies etc.

**D. Water quality monitoring**

- i. Water surface
- ii. Aquatic weeds on the Dam water surface
- iii. Water turbidity
- iv. Expansion of the vegetation in the Dam over the period

**E. Tourism Planning**

- i. Land use / land cover of the area, location map of the area
- ii. Site suitability analysis for the developing tourist site
- iii. Virtual map of the tourist location
- iv. 3D maps of famous landmark
- v. 3D videos of facility centres
- vi. Road network in the tourist location

**F. Post disaster mapping and planning of mitigation measures**

- i. Risk zone maps
- ii. Mapping the extent of disasters
- iii. Pre-post disaster map
- iv. Damage map

**G. Catchment area management**

- i. Catchment area map
- ii. Land use land cover / activities maps
- iii. Deforestation and soil erosion in the catchment area
- iv. Catchment area conservation reports

**H. Project Progress Monitoring**

- i. Geotagged- stable, colour corrected photo, images and video
- ii. 3D model of the construction site
- iii. Photo, images, video comparison
- iv. Textual, audio information edited photo, images, video
- v. Cut / combine / split with pan and zooming on important features

**I. Dam safety and inspection**

- i. Safety measurement Geo-tagged photo, images, video
- ii. Hydro-electric dam images, videos using underwater Drones
- iii. Intake Gate images, videos using Underwater Drones
- iv. Hydro dam intake Gate images, videos using Underwater Drones
- v. Under water tunnel images, videos using underwater drones

**J. 3D mapping of important dam**

- i. 3D framework of the Dam / Asset for Geometric recreation
- ii. 3D model of the Gate / Dam line

**NOTE:**

The data collected through drone survey may be used as base data for current season and upcoming seasons in next years. This data may be collected in such a manner that it acts as master database for WRD (farmer master with specified land holding in gut numbers and details of canal network, structures, long term LIS permissions etc.). All the data such as crop identification, source of irrigation (canal/reservoir/river/well), method of irrigation (Flow/Lift), type of irrigation (Drip/flooding), ownership etc. required to prepare assessment sheet shall be collected by the bidder. Draft assessment sheets shall be prepared based on such collected data and billing logic provided by WRD based on irrigation tariff.

- i. The GIS data base should be capable of getting answers using appropriate software (being developed by WRD) with help of GIS queries.
- ii. All images and Vector based digitized GIS maps and textual data will be stored on Cloud provided by WRD and shall be retrievable for use for Decision Support System (DSS) through reports, dash boards etc. All data base collected will be stored and maintained for history and audit trails
- iii. Videos / images of the projects will be used in Project progress monitoring application. Other GIS database will be used in WRD GIS portal for Asset Information System and Decision Support System.
- iv. All the Asset maps / GIS data will be stored on WRD GIS portal / Master Database Management (MDM) / relevant applications.
- v. All the Irrigation billing related data will be stored in Integrated Irrigation Management Application (IIMA) / Master Database Management (MDM)

**4) Validation of Data**

WRD officer and bidder shall jointly validate the surveyed / prepared / entered the textual / attribute database and GIS database for the entire influence area and bidder should provide all necessary support.

- i. Random Ground truthing of minimum 10% of aerial surveyed area can be done (Type of Crop, area of crop and source of water) jointly by Bidder and WRD official. 10 % of validation is also done for all other GIS database and textual database.
- ii. The draft assessment sheets modified after joint Ground truthing shall be presented before the villagers for validation with ample advance notice to Gram Panchayat and revenue officials. The queries and objections raised on the draft assessment shall be noted and addressed by joint inspection at site.
- iii. Irrigated crop area shall be measured with accuracy of +/- 0.01 Ha. The sum of measured crop area and fallow area should not exceed the total area of Gut as per revenue records. If some area of the Gut is kept un-sown/ fallow for that season, it shall be mentioned.

## **5) Data entry through Web system or in Spreadsheets**

Selected Bidder shall collect / survey / prepare and enter the textual / attribute database for the entire influence area using web form / spreadsheets.

- i. The bidder shall upload assets maps on the WRD GIS web portal.
- ii. The Bidder shall upload images, videos on the Project progress monitoring system
- iii. The bidder shall prepare 7/12 details in spreadsheets (Land record data of farmers: Village-wise gut number, area of gut, owned area, cropped area etc.)
- iv. The bidder shall enter / upload all textual data (Farmer master, Project master, Dam master, WUA master, Tariff structure, project layout details etc.) provided by Water Resources e-Governance Circle online system named as IIMA / MDM by data entry in web pages / forms.
- v. The bidder shall prepare Assessment sheet in Marathi / English language as directed by Engineer in charge and submit to concerned Engineer in-charge.

## **6) Data deliverables / submission**

Selected Bidder shall submit the following GIS and textual database for the entire influence area. Accuracy as per National Natural Resource Management System (NNRMS) and National Geospatial Policy (NGP) as follows:

### **A. Deliverable to field offices in Single Hard Disk –**

- i. High resolution raw images
- ii. Village wise Ortho-mosaic images having 2 cm spatial resolution.
- iii. Data set as explained in Scope of work (section 2.1) in prescribed format as Annexure 17,18,19 of Section IV
- iv. Assessment sheet with abstract, irrigation bills etc. through web based IIMA system for verification.
- v. Assessment sheet with abstract, irrigation bills etc. to be handed over to field office in hard copies in Marathi/English.
- vi. Village wise clickable PDF containing ortho-mosaic image, Khasra /port-hissa number, crop type, crop area, water source etc. (crop should be clearly identified on ortho-mosaic image after zoom in the pdf).
- vii. Metadata of the Geo-spatial database
- viii. Submission of latest 7/12 extract in soft form
- ix. Submission of soft & hard copy of village wise assessment sheet/Aakarni Takta in booklet form
- x. Submission of draft Water bills in soft form

### **B. Deliverables to Water Resources e-Governance circle through online system / Hard disk**

1. The bidder shall upload all GIS data, Ortho-images through online system named as IIMA / MDM / Project Progress Monitoring Application / WRD GIS portal etc.
2. The bidder shall enter / upload all textual data (Farmer master, project master, assets master, WUA master etc.) through online system named as IIMA / MDM by

- data entry in web pages/forms.
3. All above data except raw images, submit in single external hard disk to e-Governance circle, Pune at their own cost.

## **7) Preparation of Reports**

- i. **Preparation of ‘Mojani anti Ahwal’ and assessment sheet:** *Mojani antiahwal* and assessment sheet shall be prepared by bidder in prescribed format given in IIMA.
- ii. **Preparation of final assessment sheet and abstract of assessment sheet:** After resolving all queries of WRD officials and concern raised by farmers during Chawdi vachan, final assessment sheet shall be prepared and abstract of assessment sheet shall also be submitted in soft (through IIMA) and hard copies.
- iii. Preparation of Catchment area conservation report
- iv. Preparation of Pre and Post Disaster report
- v. Preparation of Water surface weed spread report
- vi. Preparation of Dam safety and inspection report
- vii. Preparation of Project performance (irrigation) report
- viii. Preparation of Tourist report and location booklet

### **2.2 Roles and responsibility of the Bidder**

1. To take all precaution required for Drone survey, data collection etc.
2. To collect requisite primary data
3. To complete the Drone survey and image processing, editing etc.
4. To match the ortho-mosaic maps with adjoining area
5. To provide the requisite GIS database as per scope of work.
6. To validate all database
7. Submit the soft data in portal , database, CSP compound in desired format (physically), as per decided SOP & interval.
8. To prepare reports and submit.
9. To support in development for geoportal, ground truthing app.
10. To support in data integration for MDM & other applications.
11. To comply with all the applicable laws and rules of Government of India, Government of Maharashtra.
12. To agree and confirm under this project shall:

- Have responsibilities and duties as per the circular/GR issued by the Water Resources Department and Government of Maharashtra from time to time
- Not divulge or disclose any confidential data of the Water Resources Department to any person or entity
- Render their sincere services to the Water Resources Department during any kind of natural calamities to their best extent.
- Not in any way act against interest of the Water Resources Department.
- Have polite, cordial and positive behaviour while working at the Water Resources Department's location

### **2.3 Roles and responsibility of the WRD**

- A. WRD offices may provide the available data (in soft form or hard copy) for example command map with details of canal network, WRD owned land, buildings, map of WUA.
- B. The concerned WRD office will issue necessary instructions to other departments such as Revenue, settlement commissioner, MRSAC etc. to make required data available to successful bidder. WRD's liability shall only be limited to issue letters. Further persuasion and getting the required data available with other departments shall be bidder's responsibility.
- C. The applicable water tariff structure shall be provided to the successful bidder for preparation of assessment sheet.
- D. The WRD office may verify the data submitted by bidder (ortho-mosaic images, GIS data, spreadsheets etc.)
- E. The WRD office may verify and rectify draft assessment sheet submitted in Excel and hard copies
- F. Joint inspection for Ground truthing along with bidders' team
- G. Chawdi Wachan: The draft assessment sheet shall be made available to public by "Chawdi Wachan" through Gram Panchayat of each village with advance intimation to villagers. Objections received relating to measured area, crop type identification or ownership shall be resolved by physical verification at site. Verification of source of water for which complaints received can be done by WRD officials. Grievance redressal for any other related complaints shall also be done by WRD.
- H. Preparation of final assessment sheet: After Chawadi Wachan, draft assessment sheet shall be evaluated by WRD officials and finalized as per the prevailing rules.

- I. Distribution of Irrigation Bills: The distribution of irrigation bills shall be the responsibility of WRD.
- J. If WRD officials do not respond to the submissions within 30 days, the submission made by the bidder shall be deemed to be approved. The concerned officials of WRD shall be responsible for any omissions or errors in submitted data.

## 2.4 Project timeline, Payment Schedule & Terms

### 1) Timelines and frequency

The activities are diverse by nature. The activity of cropped area measurement is significant for the season till the crop is standing in fields. Hence, crop identification work should be completed when the crop is standing position. Other work should be completed within the stipulated timelines by the bidder as depicted in the table.

Sr.	Entity	Frequency	Timeline
1	Asset Mapping, Irrigation Billing & Performance of Irrigation Project, Illegal source of Irrigation & encroachment	1	12 Month
2	Water quality monitoring	As per Project requirement	1 Month
3	Tourist planning	1	2 Month
4	Post Disaster map	As per requirement	2 Week
5	Catchment Area Management	1	2 Month
6	Project Progress Monitoring	As per Project requirement	--
7	Dam safety and Inspection	As per Project requirement	1 Month
8	3D mapping	1	2 Month

**Note:** - All these timelines would also require the Department to commit / adhere to the timelines for review and approval before vendor starts the next phase. No Penalizing will be done to the Bidder if there is any delay from Department

### 2) Payment Schedule

Sr.	Phase / Milestones of payment	Deliverables	Payment (As % of Contract Value)
1	Required primary data collection, Drone Survey as per Scope of work	Data in Soft form Raw - Images, Videos, Photos, Primary data	20%
2	Ortho-mosaic maps, edited videos, GIS data as per Scope of work	Data in Soft form Ortho-mosaic Images, Videos, Photos, GIS database, Spreadsheets etc.	20%

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3	Sample Ground Truthing by joint inspection of WRD officials & bidder to verify all GIS Database as per scope of work		15%
4	Submission of corrected / updated / verified database as per scope of work	In softcopy and Hard copy All data (Images, Videos, Photos, GIS database, Spreadsheets etc.) except raw data	25%
5	Reports and Spreadsheets as per scope of work	In soft form and one hard copy	10%
6	Submission of data to Water Resources e-Governance Circle in single external hard-disk and uploading data successfully in software application like IIMA or MDM or Project Monitoring System or GIS Web Portal etc.	All data (Images, Videos, Photos, GIS database, Spreadsheets, Reports etc.) except raw data	10%
<b>Total</b>			<b>100%</b>

### 3) Payment Terms

- The bidder's request for payment shall be made to WRD in writing, accompanied by an invoice describing, as appropriate, the milestone or milestones, delivered along with necessary reports / documents.
- Payments shall be made by WRD, after submission of a valid invoice by the bidder.
- If any additional copies of invoices and deliverables are requested, the same should be provided to WRD.
- Payment for invoice raised by the bidder for milestone / milestones shall be made only after satisfactory completion of milestones approved by nodal department of WRD
- All the payments shall be made only in INR.

#### 2.5 Personnel to be Deployed for the Project

The bidder should not have less Resources on pay roll mentioned in 'Employed' category at the time of submission of the bid. For consortium, the lead bidder shall satisfy the criteria. The details of such resources shall be submitted along with the bid as per Annexure 8 and the bidder shall submit an undertaking as given Annexure 7

The below table (Resources required) defines the minimum number of resources that the firm shall have per one (1) lakh Ha. of project are bid out for, at the time of bidding.

Table: Resources required

Sr.	Resources Type	No. of Resources		Qualification Criteria	Minimum Experience
		Employed	To be hired		
1	Project Manager	1	--	B. Sc./B.E./PGDBA /M. Sc. /MBA. In any stream and Minimum 2 years'	5 Years

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				<b>experience in handling Geo-spatial projects.</b>	
2	<b>GIS Experts</b>	1	1	B.Sc. / M. Sc. In Geoinformatics / GIS / Remote Sensing	3 Years
3	<b>GIS Analyst</b>	2	6	B.Sc. In Geoinformatics / GIS / Remote Sensing or Minimum 3 Month certification course in GIS / Remote Sensing with any graduation	1 Year
4	<b>Drone Operator</b>	5	10	10th Exam in English, Certificate from DGCA approved Flying Training Organization	Undergone ground / practical training
5	<b>Field Surveyor</b>	3	10	Any Graduate having experience in survey and Computer Skill	1 Year

## **2.6 Training and user manuals**

Prepare and organize training programs to facilitate the departmental users in the efficient usage of the GIS database. The Hands-on Training should be provided on the GIS and data base to the concerned employees.

The Bidder/SI shall provide training to departmental users to efficiently use the system. The staff thus trained would subsequently train the other staff as and when required.

The Application Training will comprise following: –

- **Technical**
  - Menu & Application Navigation Options in open source GIS software
  - Basic GIS functionality (pan, zoom, search, edit, thematic presentation etc.)
  - User manuals
- **Procedural**
  - Do's and Don'ts
  - Controls & Checks to be followed

## **2.7 SLA Management**

- i. The bidder shall provide proper plan, resources and escalation procedure for the employer to report problem case or support request during the project initiation.
- ii. The bidder shall get their project operations in line with project timeline for various SLA management, issue reporting, resolution, etc
- iii. The bidder shall act as a single point of contact and follow-through with the principals of any third-party providers until the successful resolution of the case.
- iv. The support hours for the software shall be:  
**Mondays to Friday: 9.30am to 6.00pm** (Excluding Saturday, Sunday & Public Holidays)
- v. The bidder's key personnel shall always be contactable via phone with WRD officials.
- vi. The bidders senior technical / management will be required to visit [Office name] office for resolving critical issues.

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vii. Upon notification of the problem, the Bidder's personnel must respond within the required time specified in this tender during the support hours of the systems.

**1) SLA measurement and monitoring**

The employer shall report the identified bug / problem/ non-functional component to the successful Bidder through telephone / email / letter / verbally/ SLA monitoring tool. Resolution time expected for various GIS data components is given in the table below. Penalty shall be considered for the official working hours only (9:30 am to 6 pm). Vendor need to either repair or replace the GIS database and make it functional (from the entire system perspective) within the expected resolution time. In case of repairing, the accurate GIS database needs to be replaced within 15 days else the penalty amount shall be considered. The following table defines the SLA requirements for all project components as per the services:

**2) SLA Applicable during project phase**

#	Services	Parameter	Validation	Penalty
1	Adherence to project timelines	Adherence to timelines as defined in the project timelines in this RFP	Number of days of delay for each milestone as defined in the project timelines in this RFP	INR 1,000 per day of delay  If the delay exceeds more than 30 days, Employer may decide to terminate the contract

**3) SLA for GIS data creation and Field survey**

Sr	Parameter	Condition	Penalty
1	Geo-referencing of Images	The average RMS error shall not exceed 0.5	0.10 % of the project fees.
2	GIS Data locational accuracy	Should not exceed 1 Meter	0.10 % of the project fees.
3	GIS data accuracy	Should have 90 % accurate data	0.10 % of the project fees
4	GIS data completeness	Should have 100 % recorded data to be complete	0.10 % of the project fees
5	Spreadsheets data, Textual database, and Reports	Should have 90 % accurate data	0.10 % of the project fees

The aggregate penalty should not exceed 10% of the total project cost. In case, the penalty is exceedingly more than 10%, then WRD shall have the right to terminate the contract and award the remaining works to the next eligible firm identified through this tender.

# **Section – III Draft Agreement**

### 3. Draft Agreement

#### (The Draft Agreement is read as a part of Tender)

This Draft Services Agreement (hereinafter referred to as “**Agreement**”) is made on this the <\*\*> day of <Month> 2021 (hereinafter referred to as “**Effective Date**”) at [**City name, India**]

By & Between

.....**<<Insert Designation of Authorized Signatory, Division name>>**

**Water Resources Department**, Government of Maharashtra, having its office at [Address] (hereinafter referred to as “**WRD**”, which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors, representatives, Associates and permitted assigns) of the FIRST PART;

And

M/s. .... - a Company incorporated under the Companies Act, 1956, having its registered office at ..... (hereinafter referred to as “**Selected Service Provider or AGENCY**” which expression shall, unless the context otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the ‘Parties’ and individually as a ‘Party’

**Whereas:**

- a) The [**Division name**] **Water Resources Department** (WRD), Government of Maharashtra has issued the Request for Proposal No. <TBD> dated <TBD> (hereinafter referred to as “**RFP**”) through an open competitive bidding process invited proposals from competent persons by way of RFP, to appoint a reputed IT/ITES organization which can supply the requisite technical manpower to enable WRD to build a competent and sustainable organization team for supporting the execution of its several programs and projects.
- b) AGENCY has participated in the bidding process and post evaluation of its bid; AGENCY has been selected as a successful bidder to undertake various Geo-spatial activities.
- c) WRD has issued a letter of intent (LOI) No. <TBD> dated <TBD> in favour of AGENCY, thereby successful agency for the project and calling upon it to execute the contract with it.

**Now, therefore**, in consideration of the mutual representations, warranties, covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, with the intent to make themselves legally bound agree as follows:

#### 1) Definitions

In this Agreement, in addition to other words and expressions that may be defined elsewhere in this Agreement, unless the context otherwise requires, the following

capitalized terms wherever used in the Agreement shall have the meanings as ascribed hereunder:

- 1) "Agreement" means this service agreement, its Schedules, its Annexures and any written amendments or Variations thereof, made in accordance with its terms.
- 2) "Applicable Law" means, with respect to each Party, all laws, codes, ordinances, statutes, rules, regulations, orders, decrees, judgments, injunctions, notices or binding agreements promulgated or entered into or issued by any Government Authority having jurisdiction over such Party, the Project or such Party's obligations under this Agreement, as the same may be modified, amended or repealed from time to time.
- 3) "Business Day" means any day other than Saturday, Sunday, public holiday in the State of Maharashtra or other holiday as observed by Water Resources Department.
- 4) "Business Hours" means the working hours from 9:30 A.M. to 6:30 P.M. on all Business Days (including any Gregorian month).
- 5) "Change in Tax" means, after the Execution Date: (a) a change in the rate of an existing Tax after execution of this Agreement; or (b) the imposition of a new Tax or repeal of any existing Tax in relation to the direct transaction between the Parties, but excluding changes in withholding taxes and direct taxes (which include income tax, corporate tax, profession tax and wealth tax) and formation of a new law by subsuming of existing laws.
- 6) "Claim" includes any claim, proceeding, cause of action, action, demand, penalty or suit (including by way of contribution or indemnity) at law or in equity
- 7) "Commencement Date" means the date from which the Parties become liable to perform their obligations under this Agreement
- 8) "Government Authority" means any federal, state, local, and municipal or other governmental, regulatory, administrative, judicial, quasi-judicial, public or statutory instrumentality, court or governmental tribunal, agency, commission, authority, body or entity, or any political subdivision thereof, having legal jurisdiction over the matter or Person in question.
- 9) "AGENCY's Representative" means the person nominated by AGENCY for execution of this agreement
- 10) "Loss" means any and all judgments, damages, fines, losses, liabilities, interest, awards, penalties, costs and expenses, including, reasonable attorneys' fees, court costs, and other reasonable costs of suit, dispute resolution or other similar proceedings.
- 11) "Water Resources Departments Representative" means the person nominated by Water Resources Department for execution of this agreement
- 12) "Notice" means a notice given in accordance with this Agreement.
- 13) "Personnel" means in relation to AGENCY's employees, officers who are deployed under this Agreement.
- 14) "Price" shall have meaning ascribed to it in this Agreement.

- 15) "Resource Deployment Time" shall mean the time that is agreed between the AGENCY and Water Resources Department for undertaking various Geospatial activities.
- 16) "Scope of Work" means the scope of work in relation to programs and projects of Water Resources Department, as detailed in this Agreement.
- 17) "Start Date" means the first day of AGENCY's for undertaking various Geospatial activities at Water Resources Departments under this Agreement
- 18) "Taxes" means any taxes, fees, levies, statutory charges, interest, penalties or other sum levied pursuant to any Applicable Law, including all sales, value added, excise and storage taxes, service taxes, license and permit fees, entry tax, works contract, levies, CESSs, imposts, deductions, charges, withholdings and duties
- 19) "Work Order" shall mean the work order issued by Water Resources Department to AGENCY to for undertaking various Geospatial activities for desired area of Water Resources Department under this Agreement.

## **2) Interpretation**

In this agreement, unless a contrary intention is evident:

- the clause headings are for convenient reference only and do not form part of this agreement;
- unless otherwise specified a reference to a clause number is a reference to all of its sub-clauses;
- unless otherwise specified a reference to a clause, sub-clause or section is a reference to a clause, sub- clause or section of this agreement including any amendments or modifications to the same from time to time;
- a word in the singular includes the plural and a word in the plural includes the singular;
- a word importing a gender includes any other gender;
- a reference to a person includes a partnership and a body corporate;
- a reference to legislation includes legislation repealing, replacing or amending that legislation;
- Where a word or phrase is given a particular meaning, it includes the appropriate grammatical forms of that word or phrase which have corresponding meanings.
- In the event of an inconsistency between the terms of this agreement and the RFP and the Bid, the terms hereof shall prevail.

## **3) Priority of documents**

The several documents forming the agreement shall be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies, the priority of the documents forming this agreement shall be as follows:

- This Agreement
- RFP document
- AGENCY's proposal
- Water Resources Departments Letter of Intent (LOI)
- Water Resources Departments Work Order
- Any other document which has expressly agreed to by the Parties to form part of the agreement

#### **4) Appointment Period**

The appointment period of AGENCY under this agreement shall be for a period of **XXX (XX)** Month / years from the date of signing the agreement. Water Resources Department reserves the right to further extend the validity of the appointment maximum by **XXX (XX)** Month / years, keeping the terms of appointment same or with changes mutually agreed.

#### **5) Security Deposit / Performance Bank Guarantee**

- 1) On receipt of LOI, AGENCY shall have to deposit the Performance Bank Guarantee (PBG) of **INR. xxxxxxx (Rupees XXXXX lakh XXXXXX thousand only) <<4% of the estimated cost of the BID>>** by way of BG from a Scheduled Bank with Water Resources Department within the stipulated timeline mentioned in the LOI.
- 2) The PBG so submitted shall be valid for the period duration and it shall be discharged by Water Resources Department after 3 months post the completion of contract.
- 3) AGENCY shall have option of converting the EMD so paid while submitting the Bid into the PBG to be deposited with the Water Resources Department.
- 4) The proceeds of PBG shall be payable to Water Resources Department as compensation for any loss / penalties / liquidated damages resulting on account of AGENCY's failure under this agreement.
- 5) AGENCY shall pay PBG (Performance Bank Guarantee) within 15 working days of notification of award.
- 6) AGENCY shall have to furnish a renewed PBG for an appropriate extended period in case Water Resources Department decide to extend the contract period.

#### **6) Confidentiality**

- 1) AGENCY agrees that Water Resources Department, during the term of agreement, shall make available sensitive data which may be highly confidential pertaining to Water Resources Department 's operation, government policy & guidelines etc (hereinafter referred to as "**Confidential Information**") to AGENCY's resources deployed at Water

Resources Departments location under this Project. Hence the function of Water Resources Department requires AGENCY to demonstrate utmost care, sensitivity and strict confidentiality. Disclosure or usage of such data by any un-authorized recipient may cause considerable damage to Water Resources Department.

- 2) AGENCY hereby agrees to maintain strict privacy and confidentiality of Water Resources Departments confidential information so provided under this agreement or its resources may get access to while working at Water Resources Department.
- 3) AGENCY, shall not copy the confidential Information or allow it to be copied or disclose, transfer, publish or communicate the confidential information in any manner to any person directly or indirectly in whole or in part, without Water Resources Departments prior written consent except as otherwise expressly provided in this Agreement or as required in connection with AGENCY's use as permitted by Water Resources Department.
- 4) AGENCY shall make adequate provisions so as not to allow unrestricted access to such confidential information to people who may have not have necessary permissions. AGENCY or any of its resource shall not sell or part with such data in any form.
- 5) AGENCY, further agree to take such steps necessary to protect Water Resources Departments confidential information from unauthorized use, reproduction and disclosure as AGENCY's may take in relation to its own confidential information of the same type, but in no event less than reasonable care; and to use such confidential information only for the purposes of this Agreement or as otherwise expressly permitted or expressly required by this Agreement or as otherwise permitted by Water Resources Department in writing
- 6) In case of any breach of this confidentiality clause by AGENCY or any of its deployed resource may occur then, heavy penalty or termination of the agreement or both shall be imposed along with prosecution by Water Resources Department. The amount of the penalty will be decided by Water Resources Department based upon severity of the default.
- 7) This confidentiality clause does not apply to any information / data if it:
  - which is publicly known or becomes publicly known other than by breach of this Agreement or any other obligation of confidentiality by AGENCY;
  - was rightfully in the possession of AGENCY at the time of disclosure to it without any obligation to restrict its further use or disclosure;
  - which is disclosed to AGENCY without restriction by a third party when the third party is not, to the best of AGENCY's knowledge, subject to a confidentiality obligation to the Disclosing Party; or
  - is developed independently by AGENCY without reliance on any of Water Resources Departments confidential information;
- 8) AGENCY's resources will have to sign a Non-Disclosure Agreement (NDA) with Water Resources Department at the time of their deployment under this agreement.

**7) Ethics**

AGENCY represents, warrants and covenants that it has given no commitments, payments, gifts, kickbacks, lavish or expensive entertainment, or other things of value to any employee of WRD or its nominated agencies in connection with this agreement and acknowledges that the giving of any such payment, gifts, entertainment, or other things of value is strictly in violation of Water Resources Department standard policies and may result in cancellation of this Agreement.

**8) Profiles of the Resources to be deployed**

AGENCY shall ensure that resources to be deployed under this Agreement, should possess the minimum qualification as detailed in this Agreement.

**9) AGENCY's Obligations**

- 1) AGENCY's obligations shall include all the activities as specified by the Water Resources Department in the Scope of Work and other sections of the Tender and Contract and changes thereof to enable Water Resources Department to meet the objectives and operational requirements.
- 2) It will be AGENCY's responsibility to ensure various Geospatial activities in accordance with and in strict adherence to the terms of this RFP and this Contract.
- 3) AGENCY shall bear all expenses regarding Drone survey, image / video processing, GIS database preparation, field survey, reports and tabular forms preparation etc.
- 4) AGENCY shall always be contactable, and message sent by phone/e-mail/Fax/Special Messenger/SMS from Water Resources Department and shall acknowledge immediately on receipt on the same day.
- 5) AGENCY shall fulfil any other obligations as mentioned in the RFP document.
- 6) AGENCY shall provide training to resources as and when required at their own cost.
- 7) AGENCY shall comply with all applicable laws and rules of Government of India and/or Government of Maharashtra.

**10) Employer's Obligations**

- 1) The concerned employer shall act as the nodal point for implementation of the contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to AGENCY.

- 2) WRD's representative shall interface with AGENCY to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the agreement.
- 3) The requisite work / project description will be provided by the employer.
- 4) WRD may provide on AGENCY's request, particulars/information/ or documentation that may be required by AGENCY for providing services covered under this agreement.
- 5) The concerned employer shall ensure that timely approval is provided to AGENCY as and when required or any other document necessary in fulfilment of this agreement.
- 6) Water Resources Department shall ensure that the payment to AGENCY shall be released as per the stipulated payment terms mentioned in this agreement.

## **11) Service Level Agreement**

AGENCY shall monitor and maintain the verbally discussed, stated service levels to provide quality product / services to Water Resources Department. In case of default on any or all such Service Levels, Water Resources Department reserve the rights to levy penalties on AGENCY. The penalties shall be recovered from the invoices submitted by Agency.

- 1) AGENCY will have to provide the required database within the timeline mentioned in the RFP (or within such additional time as may be allowed by Water Resources Department) from the date of receipt LOI. If it delays 15 days beyond the timelines (or the extended time allowed by Water Resources Department), then Rs. 1000 shall be deducted per day. This amount shall be recovered from the payment of the succeeding payment schedule.
- 2) If the AGENCY delay to provide the required database more than 30 days, Water Resources Department may decide to terminate the contract.
- 3) In case of non-performance by the AGENCY in undertaking Geo-spatial activities, AGENCY shall be levied penalty as mentioned in the table. In case this non-performance is repeated three times by the AGENCY, WRD shall have the right to terminate the contract.

<b>Sr</b>	<b>Parameter</b>	<b>Condition</b>	<b>Penalty</b>
1	Geo-referencing of Images	The average RMS error shall not exceed 0.5	0.10 % of the project fees
2	GIS Data locational accuracy	Should not exceed 1 Meter	0.10 % of the project fees

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3	GIS data accuracy	Should have 90 % accurate data	0.10 % of the project fees
4	GIS data completeness	Should have 100 % recorded data to be complete	0.10 % of the project fees
5	Spreadsheets data, Textual database, and Reports	Should have 90 % accurate data	0.10 % of the project fees

- 4) Where any claim for the payment of a sum of money arises, out of or under this contract against the AGENCY, Water Resources Department shall be entitled to recover such a sum by appropriating in part or whole, from the performance bank guarantee to be deposited by the agency.
- 5) In the event of the Performance Bank Guarantee being insufficient, the balance of the total sub recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the agency under. Should this sum not be sufficient to recover the full amount recoverable, the agency shall pay to the Water Resources Department the remaining balance due.

## **12) Events of Default by AGENCY**

The failure on the part of AGENCY to perform any of its obligations or comply with any of the terms of this agreement shall constitute an Event of Default on the part of AGENCY. The events of default as mentioned above may include inter-alia the following:

- 1) AGENCY has failed to perform any instructions or directives issued by Water Resources Department which it deems proper and necessary to execute the scope of work or provide services under the agreement, or
- 2) AGENCY has failed to confirm / adhere to any of the key performance indicators as laid down in the Key Performance Measures / Service Level Agreements, or if AGENCY has fallen short of matching such standards / benchmarks / targets as Water Resources Department may have designated with respect to the system or any goods, task or service, necessary for the execution of the scope of work and performance of services under this agreement. The above-mentioned failure on the part of AGENCY may be in terms of failure to adhere to performance, quality, timelines, specifications, requirements or any other criteria as defined by Water Resources Department;
- 3) The Service Levels shall be as per the WRD manual. Any changes from time to time in the manual shall be adhered to be the AGENCY.
- 4) AGENCY has failed to remedy a defect or failure to perform its obligations in accordance with the specifications issued by Water Resources Department, despite being served with a default notice which laid down the specific deviance on the part of

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AGENCY to comply with any stipulations or standards as laid down by Water Resources Department; or

- 5) The AGENCY has failed to adhere to any amended direction, instruction, modification or clarification as issued by Water Resources Department during the term of this agreement and which Water Resources Department deems proper and necessary for the execution of the scope of work under this agreement
- 6) AGENCY has failed to demonstrate or sustain any representation or warranty made by it in this agreement, with respect to any of the terms of its Bid, the RFP and this agreement
- 7) There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to AGENCY.
- 8) AGENCY has failed to comply with or is in breach or contravention of any applicable laws.
- 9) AGENCY are involved in fraud/wilful misconduct

Where there has been an occurrence of such defaults inter alia as stated above, Water Resources Department shall issue a notice of default to AGENCY, setting out specific defaults / deviances / omissions / non-compliances / non-performances and providing a notice of thirty (30) days to enable AGENCY to rectify the default committed.

Where despite the issuance of a default notice to AGENCY by Water Resources Department and AGENCY fails to remedy the default to the satisfaction of Water Resources Department, then Water Resources Department may, where it deems fit, issue to AGENCY another default notice or proceed to adopt such remedies as may be available to Water Resources Department.

### **13)Consequences of Default**

Where an Event of Default subsists or remains uncured, Water Resources Department shall be entitled to issue any clarifications as may be necessary to ensure smooth continuation of the services which AGENCY shall be obliged to comply with. AGENCY shall take all available steps to minimize loss resulting from such event of default.

### **14)Terminate the agreement in Full or Part**

- 1) Retain such amounts from the payment due and payable by Water Resources Department to AGENCY as may be required to offset any losses caused to Water Resources Department as a result of such event of default and AGENCY shall

compensate Water Resources Department for any such loss, damages or other costs, incurred by Water Resources Department in this regard. Nothing herein shall affect the continued obligation of AGENCY and AGENCY's team to perform all their obligations and responsibilities under this agreement in an identical manner as were being performed before the occurrence of the default.

- 2) Invoke the Performance Bank Guarantee and other Guarantees furnished hereunder, enforce the Deed of Indemnity, recover such other costs/losses and other amounts from AGENCY as may have resulted from such default and pursue such other rights and/or remedies that may be available to Water Resources Department under law.

#### **15) Breach and Rectification**

- 1) In the event that AGENCY is in material breach of its obligations under this Agreement, Water Resources Department may issue the notice to AGENCY for curing such Material Breach. Any notice served pursuant to this clause shall give reasonable details of the material breach.
- 2) In case AGENCY fails to correct the default / breach even after the stipulated period in the notice so issued and the Material Breach continues even after the notice period, Water Resources Department will have the option to terminate the Agreement

#### **16) Intellectual Property Rights**

- 1) "Intellectual Property Rights" means any rights in or to any patent, copyright, database rights, rights in relation to the services, software, firmware, know-how, registered design or other design right, utility model, trade mark (whether registered or not and including any rights in get up or trade dress), brand name, service mark, trade name, eligible layout right, and any other rights of a proprietary nature in or to the results of intellectual activity in the industrial, commercial, scientific, literary or artistic fields, whether registrable or not and wherever existing in the world, including all applications, renewals, extensions and revivals of, and all rights to apply for, any of the foregoing rights confidential trade secrets related to research, development, design, construction, manufacturing, erection, running, maintenance of Projects and/or required for the performance of the Scope of Work under this agreement.
- 2) Water Resources Department shall own all Intellectual Property Rights of any new code written / generated or services in relation to the work performed under this agreement by AGENCY's resources under this agreement. The rights of entire data, including backups, any documents created shall be with Water Resources Department. All licenses (perpetual) would be owned by Water Resources Department.

- 3) AGENCY shall continue to retain their rights on the materials that they bring in under this agreement, provided that due permissions and approval has been obtained from the concerned employer on such materials that have been brought in by AGENCY.

## **17) Indemnification**

- 1) AGENCY (the “Indemnifying Party”) undertakes to indemnify & keep indemnify Water Resources Department (the “Indemnified Party”) from and against all direct losses, liabilities, claims or expenses arising from any claim for damages, suits, proceedings, recoveries, judgments or executions (including but not limited to litigation costs and expenses and reasonable fees of Attorney) which may be made or recovered from Water Resources Department by reason of any acts, omissions (whether negligent or otherwise) or, due to wilful misconduct of AGENCY including its resources, employees
- 2) The indemnities shall be subject to the following conditions:
  - The Indemnified Party, as promptly as practicable, informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;
  - The Indemnified Party shall, at the cost of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the defence of such claim including reasonable access to all relevant information, documentation and personnel provided that the Indemnified Party may, at its sole cost and expense, reasonably participate, through its attorneys or otherwise, in such defence;
  - If the Indemnifying Party does not assume full control over the defence of a claim, the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be included in Losses and shall be borne by the Indemnifying Party at actuals;
  - The Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;
  - All settlements of claims subject to indemnification will:
    - ✓ Be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld and include an unconditional release to the Indemnified Party from the claimant for all liability in respect of such claim;
    - ✓ Include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement;
- 3) The Indemnified Party shall account to the Indemnifying Party for all awards, settlements, damages and costs (if any) finally awarded in favour of the Indemnified Party which are to be paid to it in connection with any such claim or proceedings;

- 4) The Indemnified Party shall take legally permissible steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings;
- 5) In the event that the Indemnifying Party is obligated to indemnify the Indemnified Party pursuant to this Article, the Indemnifying Party will, upon payment of such indemnity in full, be subrogated to all rights and defences of the Indemnified Party with respect to the claims to which such indemnification relates;

## **18) Limitation of Liability**

- 1) Neither this Agreement nor the services delivered by AGENCY under this Agreement grants or creates any rights, benefits, claims, obligations or causes of action in, to or on behalf of any person or entity (including any third party) other than between the respective Parties to this Agreement, as the case may be.
- 2) The liability of AGENCY (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any claim in any manner related to this Agreement, including the work, deliverables or services covered by this Agreement, shall be the payment of direct damages only which shall in no event in the aggregate exceed the payment paid for undertaking Geospatial activities to AGENCY by Water Resources Department during the project period or 25% of the payment to be paid for undertaking Geospatial activities in the year of default, whichever is higher.
- 3) Any claim or series of claims arising out or in connection with this Agreement shall be time barred and invalid if legal proceedings are not commenced by Water Resources Department within such period as may be permitted by applicable law without the possibility of contractual waiver or limitation.

## **19) Termination**

- 1) By Water Resources Department

Water Resources Department may, terminate this agreement in whole or in part by giving AGENCY a prior and written notice (not lesser than thirty days) indicating its intention to terminate the agreement under the following circumstances:

- Where Water Resources Department is of the opinion that there has been such Event of Default on the part of AGENCY and may include failure on the part of AGENCY to rectify its failure in the performance of its obligations under the agreement within thirty (30) days after being notified by Water Resources Department

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- If, as the result of Force Majeure, AGENCY is unable to perform a material portion of the services for a period of not less than 60 days.
- Where AGENCY's ability to survive as an independent corporate entity is threatened or is lost owing to any reason whatsoever, including inter-alia the filing of any bankruptcy proceedings against AGENCY, any failure by AGENCY to pay any of its dues to its creditors, the institution of any winding up proceedings against AGENCY or the happening of any such events that are adverse to the commercial viability of AGENCY. In the event of the happening of any events of the above nature, Water Resources Department shall reserve the right to take any steps as are necessary, to ensure the effective transition of the project to a successor agency, and to ensure business continuity.
- Termination for Insolvency: Water Resources Department may at any time terminate the agreement by giving written notice to AGENCY, without compensation to AGENCY, if AGENCY becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to Water Resources Department.

In the event of termination of this agreement by Water Resources Department before the expiry of the term, AGENCY shall be given a period of 30 days to demobilize itself.

### 2) By AGENCY

AGENCY may, terminate this agreement by giving Water Resources Department a prior and written notice (not lesser than ninety days) indicating its intention to terminate the agreement under the following circumstances:

- If Water Resources Department is in material breach of its obligations pursuant to this agreement not adhering to payment terms mentioned in this agreement and has not rectified the default within 90 days of receipt of notice specifying such breach.

In even of termination of the agreement by AGENCY due to reason mentioned above, then Water Resources Department shall release the PBG issued by AGENCY un-conditionally post recovery of any penalties due.

## **20) Consequences of Termination**

1. In the event of termination of this agreement, whether consequent to the stipulated Term of the agreement or otherwise, Water Resources Department shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the project which AGENCY shall be obliged to comply with and take all available steps to minimize loss resulting from that termination/breach, and further allow and provide all such assistance to Water Resources Department and/or the successor agency, as may

be required, to take over the obligations of the erstwhile AGENCY in relation to the execution / continued execution of the scope of this agreement, even where such assistance is required to be rendered for a reasonable period that may extend beyond the agreement term/ termination hereof.

2. Where the termination of the agreement is prior to its stipulated term on account of a Default on the part of AGENCY / AGENCY's team or due to the fact that the survival of AGENCY as an independent corporate entity is threatened/has ceased or for any other reason whatsoever, Water Resources Department may pay AGENCY for that part of the services which have been authorized by Water Resources Department and satisfactorily performed by AGENCY up to the date of termination. Without prejudice any other rights, Water Resources Department may retain such amounts from the payment due and payable to AGENCY to offset any losses caused to Water Resources Department as a result of the termination or due to any act/omissions of AGENCY.
3. In case of any loss or damage due to default on the part of AGENCY in performing any of its obligations with regard to executing the scope of work under this agreement, AGENCY shall compensate Water Resources Department for any such loss, damages or other costs, incurred by Water Resources Department, as per the liability clause mentioned in this agreement.
4. Nothing herein shall restrict the right of Water Resources Department to invoke AGENCY's Performance Bank Guarantee furnished hereunder for the reasons attributable due to AGENCY's default / poor performance only, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available to Water Resources Department under law.
5. The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of this agreement that are expressly or by implication intended to come into or continue in force on or after such termination.

## **21) Dispute Resolution**

If during the subsistence of this agreement or thereafter, any dispute between the Parties hereto arising out of or in connection with the validity, interpretation, implementation, material breach of any provision of this agreement or regarding any question, disagreement or dispute arising between them under or in connection with the agreement, including as to whether the termination of this agreement by one Party hereto has been legitimate, the Parties hereto shall endeavour to settle such dispute either amicably through mutual consultation or may approach the Court of Law.

## **22)Force Majeure**

- 1) “Force Majeure” means any event which is not within the reasonable control of the Party affected, and with the exercise of due diligence, could not reasonably be prevented, foreseen, avoided or removed by such Party, and does not result from such Party’s negligence or the negligence of its agents, employees or sub-agencies, which causes the affected Party to be delayed, in whole or in part, or unable, to partially or wholly perform its obligations under this Agreement and arises due to the occurrence of any of the following events:
  - A. landslides, floods, fires, lightning, induction caused by lightning, earthquakes, storm, typhoon, tsunami, hurricane, tornado, epidemic;
  - B. war and other hostilities including terrorism (whether war be declared or not), invasion, act of foreign enemies, mobilization, requisition or embargo, rebellion, revolution, insurrection, military or usurped power and civil war;
  - C. state-wide or nationwide riot, lockdown, commotion, civil disorder, industrial disturbance, strikes or lockouts, except for strikes or lockouts isolated to the Party claiming a Force Majeure Event;
  - D. Liaisoning radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosives, or other hazardous properties of any explosive nuclear assembly or nuclear components thereof, emission of hazardous industrial gases or chemicals.
- 2) A Force Majeure Event shall not include: (a) the affected Party’s financial inability to perform under this Agreement; (b) sabotage by Personnel of the affected Party; and (c) the affected Party’s delay or failure to obtain or maintain a Government Approval.
- 3) In such an event, the affected party shall inform the other party in writing within seven days of the occurrence of such event.
- 4) Water Resources Department will make the payments due for services rendered till the occurrence of Force Majeure. However, any failure or lapse on the part of AGENCY / AGENCY’s team in performing any obligation as is necessary and proper, to negate the damage due to projected Force Majeure events or to mitigate the damage that may be caused due to the above mentioned events or the failure to provide adequate disaster management/recovery or any failure in setting up a contingency mechanism would not constitute force majeure, as set out above.
- 5) In case of a Force Majeure, all Parties will endeavour to agree on an alternate mode of performance in order to ensure the continuity of service and implementation of the obligations of a party under the agreement and to minimize any adverse consequences of Force Majeure.

- 6) AGENCY shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that it's delay in performance or other failure to perform its obligations under the agreement is the result of an event of force Majeure.
- 7) Unless otherwise directed by Water Resources Department in writing, AGENCY shall continue to perform its obligations under the agreement as far as it is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. In such a case, the time for performance shall be extended by a period(s) not less than the duration of such delay.
- 8) If the duration of delay continues beyond a period of three months, Water Resources Department and AGENCY shall hold consultations with each other in a good faith to find a solution to the problem. Notwithstanding above, the decision of Water Resources Department shall be final and binding on AGENCY.

### **23) Notices**

Each notice, demand or other communication given or made under this Agreement shall be in writing and delivered or sent to the relevant Party at its address/ email set out in **Clause 2.1** (or such other address as the addressee by 5 (five) Business Days' prior written notice has specified to the other Party).

#### **If to Water Resources Department:**

Address:

Kind Attn:

Email:

#### **If to AGENCY:**

Address:

Kind Attn:

Email:

### **24) Miscellaneous**

- 1) Publicity
  - Any publicity by the bidder in which the name of the Water Resources Department is to be used should be done only with the explicit written permission of the Water Resources Department.
- 2) Other Conditions

## *Appointment of agency for undertaking Geospatial technological activities*

- Neither Water Resources Department nor AGENCY shall, without the express prior written consent of the other, assign to any third party, the agreement or any part thereof, or any right, benefit, obligation, or interest therein or thereunder
  - Any modification of this agreement shall be in writing and signed by an authorized representative of each Party.
- 3) Relationship between Parties
- No Party has any authority to bind the other Party in any manner whatsoever except as agreed under the terms of this Contract.
  - Water Resources Department has no obligations to AGENCY / AGENCY's team except as agreed under the terms of this agreement.
- 4) Survival
- The provisions of the clauses of this agreement in relation to indemnity, confidentiality, IPR, Limitation of Liability survive the expiry or termination of this agreement and in relation to confidentiality, the obligations continue to apply unless Water Resources Department notifies AGENCY of its release from those obligations.
- 5) Entire Contract
- The terms and conditions laid down in the RFP and all annexures, addendum thereto as also the Bid and any annexes thereto shall be read in consonance with and form an integral part of this agreement. This agreement supersedes any prior agreement, understanding or representation of the Parties on the subject matter.

### **25)Governing Law**

This agreement shall be governed in accordance with the laws of Union of India and State of Maharashtra.

### **26)Jurisdiction**

The **courts of [City Name]** have exclusive jurisdiction to determine any proceeding in relation to this agreement.

Each signatory hereunder represents and warrants that it is an authorized representative of the Party for whom it is signing this Agreement, with authority to bind said Party hereto.

**IN WITNESS WHEREOF**, the Parties hereto have signed and executed this Agreement as of the date

<b>Water Resources Department</b>	<b>Selected Service Provider</b>
Signature: _____	Signature: _____
Name: _____	Name: _____
Designation: _____	Designation: _____

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Place: _____	Place: _____
in the presence of	
Witness: Signature: _____ Name: _____	Witness: Signature: _____ Name: _____

# **Section - IV**

# **ANNEXURES TO**

# **RFP**

**Appendix I. Pre-Qualification, Technical Bid Templates and document list**

PQ#	Pre-qualification Requirements	Documents to be submitted	Checklist (Yes / No)	Documentary Proof (Page No.)
PQ 1	The sole Bidder or each of the consortium partners, in case of the consortium, must be registered Company, under Companies Act 1956/ 2013 since last 5 years, as on last date of submission.	Certificate of Incorporation/Registration		
PQ 2	The sole Bidder or any of the consortium partners, in case of the consortium, must have minimum average annual turnover of INR 100 Crore from last three financial years.	Copy of financial audited balance sheets certified by statutory auditor/chartered accountant & CA Certificate clearly citing the average turnover for last 3 financial years		
PQ 3	The sole Bidder or each of the consortium partners, in case of the consortium, must have Positive net worth as of 31 <sup>st</sup> March 2021.	A copy of the CA certificate must be enclosed the Profit /loss statement.		
PQ 4	The sole Bidder or any of the consortium partners, in case of the consortium, must have been engaged in implementing at least one (01) similar project of value above Rs. 25 Cr. involving services to Govt / PSUs in India during the last three financial years	<ul style="list-style-type: none"> <li>— Copy of Work Order</li> <li>— Copy of Completion Certificate issued by client Or</li> <li>— Letter from Client- In case of ongoing projects.</li> </ul>		
PQ 5	The sole Bidder or any of the consortium partners, in case of the consortium, must have a team of at least 50 employees on its rolls as on last date of submission	Certificate from Head (HR) or company secretary for number of technical qualified professionals employed by the company		
PQ 6	The sole Bidder or any of the consortium partners, in case of the consortium, must have office in Maharashtra as on last date of submission.	Copy of the Shop Act or leave License Agreement, if any, should be uploaded/attached. Lease or Rental Agreement, Sale Deed or Utility Bill in the name of the company, or Declaration that the office will be set-up within a period of 30 days from the date of issuance of Letter of Intent		

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PQ 7	The sole Bidder or each of the consortium partners, in case of the consortium, must not have been blacklisted by any Central/State Government Organization or Department in India at the time of submission of the bid for fraudulent or corrupt practices.	An Affidavit on INR 500 non-judicial stamp paper signed by the Authorized Signatory of the Bidder. Annexure -9		
PQ 8	The sole Bidder or any of the consortium partners, in case of the consortium, must possess CMMI level 5 certification for both development and services and PCMI level 5 as on the date of bid submission.	Valid CMMI and PCMI Certificate as on date of bid submission issued by authorized partner of CMMI institute.		
TQ#	Technical qualification Requirements (With PQ)	Documents to be submitted	Checklist (Yes / No)	Documentary Proof (Page No.)
TQ	The sole bidder or any of the consortium partner, in case of the consortium, must have performed Drone survey and / or GIS mapping including field survey in India for Govt/semi Govt, /ULB/Public undertaking project of minimum 25,000 Ha. during the last three financial years	<ul style="list-style-type: none"> <li>— Copy of Work Order</li> <li>— Copy of Completion Certificate issued by client Or</li> <li>— Letter from Client- In case of ongoing projects.</li> </ul>		
Sr.	Documents Requirements	Documents to be submitted	Checklist (Yes / No)	Documentary Proof (Page No.)
1	The Bidder should have made a payment of Rs. 5000 (Rupees Five thousand only) for the tender fees.	Proof of Tender form fee payment of <b>Rs. 5000 (Rupees Five thousand only)</b> through online payment gateway available at the e-tendering portal		
2	<p>The Bidder should have submitted an Earnest Money Deposit (EMD) of <b>Rs. 50,000/- (Rupees Fifty Thousand)</b></p> <p>Earnest Money Deposit is to be obtained from the bidders except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department</p>	<p>EMD to be paid through online payment gateway available at the e-tendering portal.</p> <p>Valid Certificate issued to the bidder to be produced that they are registered either with Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department.</p>		

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3	The bidder shall have a valid GST number as on last date of submission.	Copy of GST registration certificate signed by bidder's authorized signatory		
4	The bidder shall have a valid PAN number as on last date of submission.	Copy of PAN registration certificate signed by bidder's authorized signatory		
5	The bidder must submit the power of attorney to specify an individual who will be authorized for legal and financial matters	The Power of Attorney should be executed on a non-judicial stamp paper of INR 500 (five Hundred) and duly notarized by a notary public. Annexure -10 In case of Consortium, other partner shall authorize Power of Attorney to the Lead Bidder.		

I/we acknowledge that the provided documents as mention above is true, correct, updated till date of on-line submission to the best of my/our knowledge, belief and as per my/our office records. I acknowledge that above documents submitted are final for the verification as per the checklist mentioned above. I acknowledge that in case of any missing documents or data discrepancy, I/we can be disqualified from the tender process at any stage of the bidding and will have no grievance related to the disqualification/ rejection of my bid.

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 1: Technical Proposal Cover Letter**

**(On company's letterhead)**

**To:**

**<Date>**

<Name>  
<Designation>  
<Address>  
<Phone Nos.>  
<Email id>

**Subject:** Submission of the Technical bid for Appointment of agency for undertaking Geospatial technological activities for Maharashtra Water Resources Department.

Dear Sir/Madam,

We, the undersigned, offer to provide solutions to WRD for Appointment of agency for undertaking Geospatial technological activities for a period of **[Time Period] Month/Years** with your Request for Proposal dated **<insert date>** and our Proposal. We are hereby submitting our Proposal, which includes this Technical bid and the Financial Bid uploaded on the Mahatender portal (<https://mahatenders.gov.in>).

We hereby declare that all the information and statements made in this Technical bid are true and accept that any misinterpretation contained in it may lead to our disqualification. We undertake, if our Proposal is accepted, to initiate the Implementation services related to the assignment.

We agree to abide by all the terms and conditions of the RFP document. We would hold the terms of our bid valid for <90> days as stipulated in the RFP document.

We understand you are not bound to accept any Proposal you receive.

*Yours sincerely,*

**Name**

**Designation**

**Signature of the authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 2: General profile of the company**

#	Particulars	Details	Page No.
1	Name of the Organization		
2	Type of Organization (Pvt. Ltd/ Public Ltd/ Proprietary etc.)		
3	Country of Registered Office		
4	Address of Registered Office with Telephone Nos., Fax, E-mail, and website		
5	Company Registration Details		
6	Date of Incorporation (with document evidence for Certificate of Incorporation)		
7	GST Registration Number (with document evidence)		
8	PAN No (with documental evidence)		
9	Average Turnover for last three years (CA certified audited Statements to be submitted in company letter head with signature of authorized signatory) 2017-2018 2018-2019 2020-2021		
10	Standalone financial Audited balance sheets & Profit /loss statement, Statutory Auditor's Report, Notes to Accounts and Schedules forming part of accounts to be submitted		
11	Certificate of non-blacklisting - To be submitted in company letter head with signature of authorized signatory		

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 3: Turnover and Net-Worth Certification**

<On the letterhead of the Chartered Accountant >  
<To be submitted along with Audited Financial Statements>

Date: dd/mm/yyyy

To,  
Executive Engineer,  
Governance Computerization Division,  
Kothrud, Pune-411038  
Water Resource Department, Maharashtra

**Reference: Tender Document for Appointment of agency for undertaking Geospatial technological activities for a period of [Time Period] Years / Months for Maharashtra Water Resources Department**

Sir/ Madam,

We have examined the books of accounts and other relevant records of <<Bidder>>. On the basis of such examination and according to the information and explanation given to us, and to the best of our knowledge & belief, we hereby certify that the annual turnover, Profit before Tax and Profit after tax for the three years i.e. from 2018-2019 to 2020-2021 was as per details given below:

Information from Balance Sheets (in Indian Rupees)			
Section No.	2018-2019	2019-2020	2020-2021
Annual Turnover			
Profit Before Tax			
Profit After Tax			
Average Annual Turnover			
(Signature of the Chartered Accountant)			

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 4: Project Citation Format**

<b>Relevant IT project experience (provide no more than 5 projects in the last 5 years)</b>	
<b>General Information</b>	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
<b>Project Details</b>	
Description of the project	
Scope of services	
Technologies used.	
Outcomes of the project	
Current status of the project	
Total cost of the project	
Total cost of the services provided by the bidder	
Duration of the project (no. of months, start date, completion date, current status)	

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 5: Proposed Work Plan**

No	Activities	Calendar Month		
		1	2	n
1				
2				
3				
4				
5				
6				
n				

1. Indicate all main activities of the assignment, including primary data collection, Drone Survey, Image / video processing, GIS database preparation, field survey, Tabular and textual database preparation, data entry and submission, delivery of reports and other benchmarks such as Employer approvals. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.
2. Duration of activities shall be indicated in the form of a bar chart.
3. All activities should meet the 8/80 criteria i.e. should at least take 8 hours and a maximum of 80 hours.

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 6: Capability of the bidder**

Required document: **Certificate from Head (HR) or company secretary** for number of technically qualified professionals employed by the company along with the total work experience and number of years of service with the bidder's company.

**(On company's letterhead)**

**To:**

**<Date>**

<Name>  
<Designation>  
<Address>  
<Phone Nos.>  
<email id>

Sir/Madam,

I have carefully gone through the Terms & Conditions contained in the RFP Document for appointment of agency for undertaking Geospatial technological activities for various works.

I hereby declare that my company **<name to be specified by bidder>** has **<number to be defined by bidder>** technically professionals employed by the company on its payroll as on dated: - **<current date>**. Details of the employees are:

Sr. No	Name of the employee	Designation	Total work experience	Work Experience with the firm (in years)

**Yours sincerely,**

**Name  
Designation**

**Signature of the Authorized signatory**

**Address  
Telephone  
Fax  
E-mail address**

## **Annexure 7: Team Composition**

Name \_\_\_\_\_

## **Designation**

**Signature of the Authorized signatory**

## **Address**

## **Telephone**

**Fax**

**E-mail address**

**Annexure 8: Curriculum Vitae (CV) of Key Personnel**

<b>General Information</b>	
Name of the person	
Current Designation / Job Title	
Current job responsibilities	
Proposed Role in the Project	
Proposed Responsibilities in the Project	
Academic Qualifications:	<ul style="list-style-type: none"> <li>• Degree</li> <li>• Academic institution graduated from</li> <li>• Year of graduation</li> <li>• Specialization (if any)</li> <li>• Key achievements and other relevant information (if any)</li> </ul>
Professional Certifications (if any)	
Total number of years of experience	
Number of years with the current company	
Summary of the Professional / Domain Experience	
Number of complete life cycle implementations carried out	
Past assignment details (For each assignment provide details regarding name of organizations worked for, designation, responsibilities, tenure)	
Prior Professional Experience covering:	<ul style="list-style-type: none"> <li>• Organizations worked for in the past           <ul style="list-style-type: none"> <li>◦ Organization name</li> <li>◦ Duration and dates of entry and exit</li> <li>◦ Designation Location(s)</li> <li>◦ Key responsibilities</li> </ul> </li> <li>• Prior project experience           <ul style="list-style-type: none"> <li>◦ Project name</li> <li>◦ Client</li> <li>◦ Key project features in brief</li> <li>◦ Location of the project</li> <li>◦ Designation</li> <li>◦ Role</li> <li>◦ Responsibilities and activities</li> <li>◦ Duration of the project</li> </ul> </li> </ul>

*Appointment of agency for undertaking Geospatial technological activities*

Please provide only relevant projects.	
Proficient in languages (Against each language listed indicate if speak/read/write)	

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 9: Declaration of Non-Blacklisting**

**Format for Project Details: Declaration for not being banned or blacklisted by any State or Central Government / any other Government institutions in India**

**< on Rs 500 non-judicial stamp paper signed by the Authorized Signatory of the Bidder >**

Date: dd/mm/yyyy

Date: dd/mm/yyyy

To,  
Executive Engineer,  
Governance Computerization Division,  
Kothrud, Pune-411038  
Water Resource Department, Maharashtra,

**Reference: Tender Document for Appointment of agency for undertaking Geospatial technological activities for a period of [Period] years / Months for Maharashtra Water Resources Department**

**Subject: Declaration for not being under an ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government or Public Sector Units in India**

Sir/ Madam,

We, the undersigned, hereby declare that We are not under a declaration of ineligibility / banned / blacklisted by any State or Central Government / any other Government institutions in India for any reason as on last date of submission of the Bid or convicted of economic offence in India for fraudulent or corrupt practices as on last date of submission of the Bid.

Thanking you,

Yours faithfully

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 10: Power of Attorney**

**Power of Attorney**

Know all men by these presents, we, ..... (name of Firm and address of the registered office) do hereby constitute, nominate, appoint and authorize Mr / Ms..... son/daughter/wife and presently residing at ....., who is presently employed with us and holding the position of ..... as our true and lawful attorney (hereinafter referred to as the "Authorized Representative") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for "**Appointment of agency for undertaking Geospatial technological activities for various works**" including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in seek clarifications and other conferences and providing information/ responses to the nodal department, representing us in all matters before the nodal department, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with the nodal department in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us till the entering into of the Agreement with the nodal department.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorized Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorized Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

**IN WITNESS WHEREOF WE, ..... THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS ..... DAY OF .....  
20\*\***

**For .....**

(Signature, name, designation and address)

Witnesses:

1.

2.

Notarized

Accepted

.....  
(Signature, name, designation and address of the Attorney)

**Note:**

**The Power of Attorney should be executed on a non-judicial stamp paper of INR. 500 (five Hundred) and duly notarized by a notary public.**

**Annexure 11: Undertakings**

(Affidavit before executive Magistrate/Notary on Rs. 500 stamp paper)

**To,**

**Executive Engineer,**

**[Division Name]**

**Sir,**

- 1) I/we undertake that the given information in Proposal in response to the Tender documents is true, correct, updated till date of on-line submission to the best of my/our knowledge, belief and as per my/our office records, and nothing is hidden/ concealed, false or misleading. No further information remained to be supplied.
- 2) I/we have not omitted any work in hand i.e. information provided in form includes all the works in hand
- 3) I/we know that if at any time, it is noticed that I/we have not submitted, information regarding all the works in hand (works in hand means, the works for which work-orders are issued, works for which final bill is not passed, works which are physically incomplete, that I/we will be disqualified from tender process at any stage of the bidding by the department/Employer.
- 4) We are liable for action under Indian Penal Code for submission of any false / fraudulent paper / information submitted in envelope no.1
- 5) We are liable for action under Indian Penal Code if during contract period and period equal to the time limit, any false information, false bill of purchases supporting proof of purchase, proof of testing submitted by my staff, subletting company or by myself, I will be liable for action under Indian Penal Code.
- 6) We are liable for action under Indian Penal Code if any paper is found false / fraudulent during contract period and even after the completion of contract (finalization of final bill).
- 7) The Earnest Money Deposit (EMD) & Performance Security has been paid through Bank account owned by us and we will be liable for any legal action under Indian Penal Code (IPC) if it is found false.
- 8) As a bidder, I/we have never been penalized for any work carried out by me/us, nor I/we have been blacklisted by any Govt. Dept. previously.
- 9) I/we have not abandoned any work for reasons attributed to me/us.

- 10) I/we have not delayed completion of any work for reason attributed to me/us.
- 11) I / We have gone through each and every content, clause, condition of the whole tender documents & have accepted the same fully, unconditionally
- 12) We have studied each and every drawing & design related to the work made available on-line as well as in the office of Executive Engineer, and shall sign before issuance of work order, if my tender is accepted
- 13) We shall not tamper with or make changes in the tender documents made available by the department, on the website. Otherwise I understand that my tender shall be liable for rejection
- 14) When there is shortage of funds in [Employer Name] I / we shall not be entitled to any compensation from the Employer. This Condition will be treated as part and parcel of contact documents.
- 15) I/we undertake that I/we will make available suitably, qualified personnel, in sufficient numbers if the work is awarded to me/us.
- 16) I/we undertake that I/we will deploy the machineries in good quality & in sufficient numbers, required for the work, if the work is awarded to me/us.
- 17) I/We hereby undertake that I/We shall pay the labours engaged on the work as indicated in Section I – Detailed Tender Notice, wages as per Minimum Wages Act, 1948 and amendments thereto applicable to the zone in which work lies and act accordingly. I/We also undertake to abide by the various laws in force and extend necessary facilities and amenities to the staff and workers employed by me/us.
- 18) I/We hereby declare that I/We have made myself/ourselves thoroughly conversant with the local conditions regarding all materials and labour on which I/We have bided my/our rates for this work. The specifications of this work have been carefully studied and understood by me/us before submitting this tender.
- 19) I/We hereby undertake to indemnify and hereby indemnify the Employer against all liabilities arising out of application of all labour laws viz the Minimum Wages Act, ESIS and PF Act etc. with reference to labour engaged on subject work.

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Appendix II. Financial Proposal Template**

**Annexure 12: Financial Proposal Cover Letter**

**To:**

<Date>

<Name>  
<Designation>  
<Address>  
<Phone Nos.>  
<Email id>

**Subject:** Submission of the Financial bid for appointment of agency for undertaking Geospatial technological activities for various works

Dear Sir/Madam,

We, the undersigned, offer to provide the Implementation services for appointment of agency for undertaking Geospatial technological activities for various works in accordance with your RFP dated **<<Date>>** and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of **<<Amount in words and figures>>**. This amount is inclusive of the local taxes.

**1. PRICE AND VALIDITY**

- All the prices mentioned in our Tender are in accordance with the terms as specified in the RFP documents. All the prices and other terms and conditions of this Bid are valid for a period of 90 calendar days from the date of opening of the Bid.
- We hereby confirm that our prices include all taxes.
- We understand that the actual payment would be made as per the existing tax rates during the time of payment.

**2. TENDER PRICING**

We further confirm that the prices stated in our bid are in accordance with your Instruction to Bidders included in Tender documents.

**3. QUALIFYING DATA**

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

**4. BID PRICE**

We declare that our Bid Price is for the entire scope of the work as specified in the Appendix II, **Annexure 12 and 13** of this RFP. These prices are indicated in the Financial Bid attached with our Tender as part of the Tender.

**5. PERFORMANCE BANK GUARANTEE**

We hereby declare that in case the contract is awarded to us, we shall submit the Performance Bank Guarantee as specified in the Annexure 15 of this RFP document.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e., [Date]. We understand you are not bound to accept any Proposal you receive.

We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief. Successful Bidder shall pay PBG (Performance Bank Guarantee) within 15 working days of notification of award.

We understand that our Tender is binding on us and that you are not bound to accept a Tender you receive.

Yours sincerely,

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

**Annexure 13: Financial Proposal**

**Bidders is requested to submit Quotation for all item of work**

Sr.	QTY	ITEM OF WORK	RATE per Unit		UNIT	AMOUNT
			In Figures	In Words		
1	2	3	4	5	6	7 = 2*4*6
1	XXXX	<b>Key objectives of the Drone survey in Water Resource Department for activities:</b> <ul style="list-style-type: none"> <li>i. Asset Mapping, Irrigation Billing and performance of Irrigation projects, Illegal source of mapping</li> <li>ii. Water quality monitoring</li> <li>iii. Tourism Planning</li> <li>iv. Post disaster planning</li> <li>v. Catchment area management</li> </ul>			Ha.	

**Note:**

- All the values quoted here should be excluding the GST.
- Financial Offer must be entered online only. An Online Form, similar to the financial format given above, will be available to the bidders in Financial Envelope during Online Bid Preparation stage where bidders would quote their offer.
- The bidder will provide the financial quote on bidder's company letter head duly signed and stamped by authorized signatory, scan and upload in the financial bid envelope.
- The rates quoted here should be inclusive of Drone survey, data processing and all exercise to achieve the outcomes mentioned in the objectives A (Key objectives of the Drone survey in Water Resource Department) and L1 Bidder decided based on objectives A. Objectives B (Additional objectives of the Drone survey in Water Resource Department), will not use to decide L1 Bidder. However, if objectives B is required, the selected Bidder should match the lowest rate for Objectives B among the all bidders and accept the optional Agreement
- If selected bidder does not accept the optional agreement for the objective B, in this case, employer may ask the next L1 bidder to match the L1 prices and award the contract)

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

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**Fax**

**E-mail address**

**Annexure 14: Additional works rate card**

**This format shall not be considered for financial evaluation purpose**

Sr.	ITEM OF WORK	RATE per Unit		UNIT
		In Figures	In Words	
1	Project Progress Monitoring			Area in Sq. M.
2	Dam safety & inspection			Length in Meter
3	3D mapping			Length in Meter

Note:

- These rates shall not be used for financial evaluation purposes. In the event of a Change Request for additional works being out of project award stage, and approved by WRD, the Change Order shall be issued based on the above-mentioned rates, corresponding to rate quoted by the Bidder
- The rate quoted shall be conforming to prevailing market rates at the time of submission of the Bid and shall be as per standard industry practice.
- All the rates are inclusive of taxes.

**Name**

**Designation**

**Signature of the Authorized signatory**

**Address**

**Telephone**

**Fax**

**E-mail address**

### Appendix III. Other forms

#### Annexure 15: Performance Bank Guarantee

##### PERFORMANCE SECURITY:

To:

< Date>

<Name>

<Designation>

<Address>

<Phone Nos.>

<Email id>

Ref: \_\_\_\_\_

Bank Guarantee No. \_\_\_\_\_

Whereas, <<name of the supplier and address>> (hereinafter called "the Solution Provider") has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide Implementation services for <<name of the assignment>> to WRD Maharashtra Water Resources Department (hereinafter called "the Employer")

And whereas it has been stipulated by in the said contract that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract.

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of INR <Insert Value> (**Rupees <Insert Value in Words> only**) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of **INR <Insert Value> (**Rupees <Insert Value in Words> only**)** as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the Solution Provider shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification. This Guarantee shall be valid until <<Insert Date>>)

Notwithstanding anything contained herein:

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- I. Our liability under this bank guarantee shall not exceed **INR <Insert Value> (Rupees <Insert Value in Words> only).**
- II. This bank guarantee shall be valid up to **<Insert Expiry Date>**
- III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before **<Insert Expiry Date>** failing which our liability under the guarantee will automatically cease.

Date \_\_\_\_\_

Place \_\_\_\_\_

Signature \_\_\_\_\_

Witness \_\_\_\_\_

Printed name \_\_\_\_\_

**(Bank's common seal)**

**Annexure 16: Change Request Format**

<b>Person Raising:</b>		<b>Date Raised:</b>	
<b>CR Unique ID:</b>		<b>Version:</b>	
<b>Project Name:</b>			
<b>Details of Proposed Change</b> (To include reason for change and appropriate details/specifications. Identify any attachments as A1, A2, and A3 etc.)			
<b>Impact:</b>			
<b>Other Relevant Information:</b> (including value-added and acceptance criteria)			
<b>Impact on overall project delivery timetable?</b>			
<b>Timeline:</b>			
<b>Proposed start Date:</b>		<b>Proposed Completion Date:</b>	
<b>Authorized by the bidder</b>	<b>Date:</b>		
<b>Name:</b>			
<b>Signature:</b>			

I hereby accept the CR mentioned above and confirm my agreement to the commercial and schedule impact of the same.

**Accepted by**  
**(Client signature):** \_\_\_\_\_

**Name:**

**Date:**

**Position:**

### Annexure 17: Attributes List of GIS Layers

Sr.	Layer_Name	Geometry	Symbol	Attributes_List	Data_Type	Length	Default_Value	Source	Remark
1	2	3	4	5	6	7	8	9	10
1	State	Polygon		GIS_ID	Numeric	10		WRD	Layer should be collected from SOI / MRSAC
				State_Name	Text	20	Maharashtra	SOI	
				Farmers_No.	Numeric	10		Survey	
				Population	Numeric	15		Census	
				WUA_No.	Numeric	6		Survey	
				Total Area	Float	10,2	30771300	SOI	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
2	Division	Polygon		GIS_ID	Numeric	10		WRD	Layer should be collected from SOI / MRSAC
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				Farmers_No.	Numeric	10		Survey	
				Population	Numeric	15		Census	
				WUA_No.	Numeric	6		Survey	
				Total Area	Float	8,2		SOI	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	8,2		Survey	
				CCA	Float	8,2		Survey	

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				GCA	Float	8,2		Survey	
				IA	Float	8,2		Survey	
				Remark	Text	200		Survey	
3	District	Polygon		GIS_ID	Numeric	10		WRD	Layer should be collected from SOI / MRSAC
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Farmers_No.	Numeric	10		Survey	
				Population	Numeric	15		Census	
				WUA_No.	Numeric	6		Survey	
				Total_Area	Float	8,2		SOI	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	8,2		Survey	
				CCA	Float	8,2		Survey	
				GCA	Float	8,2		Survey	
				IA	Float	8,2		Survey	
				Remark	Text	200		Survey	
4	Tehsil	Polygon		GIS_ID	Numeric	10		WRD	Layer should be collected from SOI / MRSAC
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Farmers_No.	Numeric	10		Survey	
				Population	Numeric	15		Census	
				WUA_No.	Numeric	6		Survey	

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				Total Area	Float	8,2		SOI	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	8,2		Survey	
				CCA	Float	8,2		Survey	
				GCA	Float	8,2		Survey	
				IA	Float	8,2		Survey	
				Remark	Text	200		Survey	
5	Village	Polygon	  	GIS_ID	Numeric	10		WRD	Generated by Surveying Agency by using Settlement Commissioner / Bhu-Naksha
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Farmers_No.	Numeric	6		Survey	
				Population	Numeric	15		Census	
				WUA_No.	Numeric	4		Survey	
				Total Area	Float	8,2		Settlement Commissioner	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	8,2		Survey	
				CCA	Float	8,2		Survey	
				GCA	Float	8,2		Survey	
				IA	Float	8,2		Survey	
				Remark	Text	200		Survey	
6	WRD_Corp	Polygon		GIS_ID	Numeric	10		WRD	WRD Office - Corporation
				E_Jalseva_ID	Numeric	10		WRD	

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				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	Boundary (May Not Generated by Surveying Agency_Survey Area Concern)
				Farmers_No.	Numeric	10		Survey	
				Total Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
7	WRD_Region	Polygon		GIS_ID	Numeric	10		WRD	WRD Office - Region Boundary (May Not Generated by Surveying Agency_Survey Area Concern)
				E_Jalseva_ID	Numeric	10		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Total Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
8	WRD_Circle	Polygon		GIS_ID	Numeric	10		WRD	WRD Office - Circle Boundary (May Not Generated by Surveying
				E_Jalseva_ID	Numeric	10		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	

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				Circle_Name	Text	200		WRD	Agency_Survey Area Concern)
				Farmers_No.	Numeric	10		Survey	
				Total Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
9	WRD_Division	Polygon	  	GIS_ID	Numeric	10		WRD	WRD Office - Division Boundary
				E_Jalseva_ID	Numeric	10		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Total Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
10	WRD_Sub_Div	Polygon		IA	Float	10,2		Survey	WRD Office - Sub-Division Boundary
				Remark	Text	200		Survey	
				GIS_ID	Numeric	10		WRD	
				E_Jalseva_ID	Numeric	10		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	WRD Office - Sub-Division Boundary
				Region_Name	Text	200		WRD	

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				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Total_Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
				GIS_ID	Numeric	10		WRD	
				E_Jalseva_ID	Numeric	10		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Total_Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
11	WRD_Section	Polygon		GIS_ID	Numeric	10		WRD	WRD Office - Section Boundary
12	WRD_Bit	Polygon		GIS_ID	Numeric	10		WRD	

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			E_Jalseva_ID	Numeric	10		WRD	WRD Office - Bit Boundary
			Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
			Region_Name	Text	200		WRD	
			Circle_Name	Text	200		WRD	
			Division_Name	Text	200		WRD	
			Sub_Div_Name	Text	200		WRD	
			Section_Name	Text	200		WRD	
			Bit_Name	Text	200		WRD	
			Farmers_No.	Numeric	10		Survey	
			Total_Area	Float	10,2		WRD	
			Area_GIS	Float	10,2		Survey	
			ICA	Float	10,2		Survey	
			CCA	Float	10,2		Survey	
			GCA	Float	10,2		Survey	
			IA	Float	10,2		Survey	
			Remark	Text	200		Survey	
13	Command	Polygon	GIS_ID	Numeric	10		WRD	Project wise Command Area Boundary Boundary - WRD Should prepared in KML file
			E_Jalseva_ID	Numeric	10		WRD	
			Project_ID	Numeric	10		WRD	
			Project_Name	Text	75		WRD	
			Comp_ID	Numeric	10		WRD	
			Comp_Name	Text	75		WRD	
			Command_Name	Text	200		WRD	
			Command_Type	Text	50		WRD	
			Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
			Region_Name	Text	200		WRD	
			Circle_Name	Text	200		WRD	

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				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Total_Area	Float	10,2		WRD	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
14	Peri_Benifit	Polygon		GIS_ID	Numeric	10		WRD	Project wise Peripheral Benefitted Area Boundary - WRD Should prepared in KML file
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Comp_ID	Numeric	10		WRD	
				Comp_Name	Text	75		WRD	
				Command_Name	Text	200		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Area_GIS	Float	10,2		Survey	

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				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
15	Influence	Polygon	  	GIS_ID	Numeric	10		WRD	Project wise Peripheral Benefitted Area Boundary - WRD Should prepared in KML file
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Comp_ID	Numeric	10		WRD	
				Comp_Name	Text	75		WRD	
				Command_Name	Text	200		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Farmers_No.	Numeric	10		Survey	
				Area_GIS	Float	10,2		Survey	
				ICA	Float	10,2		Survey	
				CCA	Float	10,2		Survey	
				GCA	Float	10,2		Survey	
				IA	Float	10,2		Survey	
				Remark	Text	200		Survey	
16	Cadastral	Polygon		GIS_ID	Numeric	10		WRD	Cadastral Boundary in the
				E_Jalseva_ID	Numeric	10		WRD	

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			Gut_No.	Text	100		Settlement Commissioner	Influence Area only, MRSAC May have the River Layer for entire Maharashtra,
			Owner_Name	Text	50		Settlement Commissioner	
			Project_Name	Text	75		WRD	
			Project_ID	Numeric	10		WRD	
			Project_Name	Text	75		WRD	
			Jirayat_Area	Float	4,6		Settlement Commissioner	
			Bagayat_Area	Float	4,6		Settlement Commissioner	
			Pot-Kharab_Area	Float	4,6		Settlement Commissioner	
			Total_Area	Float	4,6		Settlement Commissioner	
			Area_GIS	Float	4,6		Survey	
			State_Name	Text	20	Maharashtra	SOI	
			Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
			District_Name	Text	20		SOI	
			Tehsil_Name	Text	20		SOI	
			Village_Name	Text	20		Settlement Commissioner	
			Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
			Region_Name	Text	200		WRD	
			Circle_Name	Text	200		WRD	
			Division_Name	Text	200		WRD	
			Sub_Div_Name	Text	200		WRD	
			Section_Name	Text	200		WRD	

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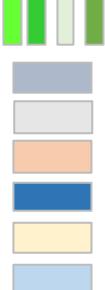
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
				GIS_ID	Numeric	10		WRD	
				E_Jalseva_ID	Numeric	10		WRD	
				Gut_No	Text	100		Settlement Commissioner	
				Gut_Area	Float	4,6		Settlement Commissioner	
				Pot_Hissa_No	Text	100		Survey	
				Owner_Name	Text	50		Settlement Commissioner	
				Project_Name	Text	75		WRD	
				Project_ID	Numeric	10		WRD	
				Crop_Type1	Text	2	SC, HT, OS, TS	Survey	
				Crop1_Area	Float	4,6		Survey	
				Crop_Type2	Text	2	SC, HT, OS, TS	Survey	
				Crop2_Area	Float	4,6		Survey	
				Crop_Type3	Text	2	SC, HT, OS, TS	Survey	
				Crop3_Area	Float	4,6		Survey	
				Water_Source	Text	5	CF, CL, Rel, RL, W, BW	Survey	
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	

Pot-Hissa  
Boundary in the  
Influence Area  
only

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				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
18	WUA	Polygon	 	GIS_ID	Numeric	10		WRD	Water User Association Boundary in the Influence Area only
				E_Jalseva_ID	Numeric	10		WRD	
				Gut_No	Numeric	5		WRD	
				Gut_Area	Float	4,6		Settlement Commissioner	
				WUA_Name	Text	50		WRD	
				Registration	Text	20		WRD	
				Project_Name	Text	75		WRD	
				Project_ID	Numeric	10		WRD	
				Crop_Type	Text	2	SC, HT, OS, TS	Survey	
				Crop_Area	Float	4,6		Survey	
				Water_Source	Text	5	CF, CL, Rel, RL, W, BW	Survey	
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	

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				Village_Name	Text	20		Settlement Commissioner	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
				GIS_ID	Numeric	10		Auto	
				Gut_No	Text	100		Settlement Commissioner	
				Pot_Hissa_No	Text	100		Survey	
				Owner_Name	Text	50		Settlement Commissioner	
				Project_Name	Text	75		WRD	
				Project_ID	Numeric	10		WRD	
				Crop_Type	Text	2	SC, HT, OS, TS	Survey	
				Fallow_Land	Text	11	Fallow_Land		
				Road	Text	4	Road	Survey	
				Gavthan	Text	7	Gavthan	Survey	
				Canal	Text	5	Canal	Survey	
				Waste_Land	Text	10	Waste_Land	Survey	
				River	Text	5	River	Survey	
				Area_GIS	Float	4,6		Survey	
				State_Name	Text	20	Maharashtra	SOI	
19	Crop/Landuse	Polygon							Landuse / Crop Type in the Influence Area only

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				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
20	Waterbody	Polygon		GIS_ID	Numeric	10		WRD	Project wise Water-bodies, MRSAC May have the Waterbody Layer for entire Maharashtra, If NOT, Need to Digitise through GIS cell for Remaining Area
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Waterbody_Name	Text	75		WRD	
				Category	Text	15	Lake, Pond, Reservoir, Cooling Pond, Cooling Reservoir, Abandoned quarry with water, Aquaculture pond, Salt pan, Lagoon, Farm Pond, Island	Survey	
				Settle_Name	Text	50		Survey	

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				Total_Area	Float	4,6		WRD	
				Area_GIS	Float	4,6		Survey	
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
21	River	Polygon		GIS_ID	Numeric	10		WRD	River within the Influence Area,
				E_Jalseva_ID	Numeric	10		WRD	MRSAC May have the River Layer for entire Maharashtra,
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				River_Name	Text	75		WRD	
				Category	Text	15	River, Sand, Island, Creek	Survey	If NOT, Need to Digitise through GIS
				Settle_Name	Text	50		Survey	
				State_Name	Text	20	Maharashtra	SOI	

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				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	cell for Remaining Area
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
22	Canal	Polygon	       	GIS_ID	Numeric	10		WRD	Canal within the Influence Area, MRSAC May have the Canal Layer (Line) for entire Maharashtra, If NOT, Need to Digitise through GIS
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Canal_Name	Text	75		WRD	
				Canal_Type	Text	15	Main, Branch, Distributory, Major, Minor, Sub Minor, Feeder, Others	Survey	
				Settle_Name	Text	50		Survey	
				State_Name	Text	20	Maharashtra	SOI	

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				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	cell for Remaining Area
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
23	Building	Polygon		GIS_ID	Numeric	10		WRD	Buildings property within the Influence Area
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Building_Name	Text	75		WRD	
				Building_Type	Text	20	Office, Guest House etc.	WRD	
				Settle_Name	Text	50		Survey	
				Rail_Station	Text	50		Survey	
				Plot_Area	Float	4,5		WRD	
				Area_GIS	Float	4,5		Survey	
				Plinth_Area	Float	4,5		WRD	
				Survey_No	Text	50		WRD	

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				Floor_No	Numeric	2		Survey	
				Const_Year	Date			WRD	
				Const_Type	Text	20		Survey	
				State_Name	Text	20	Maharashtra	SOI	
				Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI	
				District_Name	Text	20		SOI	
				Tehsil_Name	Text	20		SOI	
				Village_Name	Text	20		Settlement Commissioner	
				Address	Text	200		WRD	
				Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD	
				Region_Name	Text	200		WRD	
				Circle_Name	Text	200		WRD	
				Division_Name	Text	200		WRD	
				Sub_Div_Name	Text	200		WRD	
				Section_Name	Text	200		WRD	
				Bit_Name	Text	200		WRD	
				Remark	Text	100		Survey	
24	Land	Polygon		GIS_ID	Numeric	10		WRD	Land Property Within the Influence Area
				E_Jalseva_ID	Numeric	10		WRD	
				Project_ID	Numeric	10		WRD	
				Project_Name	Text	75		WRD	
				Building_Name	Text	75		WRD	
				Usage	Text	20	Play Ground etc.	WRD	
				Settle_Name	Text	50		Survey	
				Rail_Station	Text	50		Survey	

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Plot_Area	Float	4,5		WRD
Area_GIS	Float	4,5		Survey
Survey_No	Text	50		WRD
Acq_Year	Date			WRD
Const_Type	Text	20		Survey
State_Name	Text	20	Maharashtra	SOI
Division_Name	Text	20	Nagpur, Amravati, Aurangabad, Nashik, Pune, Konkan	SOI
District_Name	Text	20		SOI
Tehsil_Name	Text	20		SOI
Village_Name	Text	20		Settlement Commissioner
Address	Text	200		WRD
Corp_Name	Text	20	GMIDC, KIDC, MKVDC, TIDC, VIDC	WRD
Region_Name	Text	200		WRD
Circle_Name	Text	200		WRD
Division_Name	Text	200		WRD
Sub_Div_Name	Text	200		WRD
Section_Name	Text	200		WRD
Bit_Name	Text	200		WRD
Remark	Text	100		Survey

**NOTE:** The number of layers shall increase based on the objectives / Scope . It is a Bidder responsibility to match the GIS attributes to the MDM/e-Jalseva database with unique GIS ID / Unique field.

## **Annexure 18: Metadata for Geo-Spatial Layers**

<b>Metadata for All Geo-Spatial Layers</b>				
<b>Sr. No.</b>	<b>Vector database</b>	<b>Data_Type</b>	<b>Data_Size</b>	<b>Description</b>
1	Project Name	Text	100	Project Name - GIS database Preparation for WRD
2	Layer Name	Text	15	Name of the Layer - Canal, Dam
3	Layer Description	Text	100	Canal Network in the ....Area
4	Layer Type	Text	15	Type of Layer - Vector, Raster, Non-Spatial
5	File Format	Text	10	File format .shp, .Geotiff, .xls etc
6	Coordinate System	Text	20	Geographic, Planimetric
7	Projection	Text	50	Transverse Mercator, Lambert Conformal Conic
8	Datum	Text	10	WGS – 84
9	Accuracy Level	Float	2,2	% of Layer Accuracy
10	Data Source	Text	50	Drone, Satellite Image – Description
11	Scale	Numeric	5	500, 1000, 2000 etc
12	Data Owner Name, Email, Phone	Text	200	Data owner Dept. Name, Mail, Phone No
13	Agency Name, Address, Phone	Text	200	Data preparation agency, Address, Phone No.
14	Manager, Phone, Email	Text	200	Data preparation Manager, Phone No. and Email
15	Agency Website	Text	50	Data preparation Agency Website
16	MapDatumSemiMajorAxis	Float	12,4	Input of the Semi-major radius of Earth of Datum identified in Map Datum.
17	MapDatumSemiMinorAxis	Float	12,4	Input of the Semi-minor radius of Earth of Datum identified in Map Datum.
18	Survey Year	Numeric	4	Year of Survey
19	Data Creation: Day/Month/Year	Date		Data Creation Date
20	Data valid up to: Day/Month/Year	Date		Data Validation Date
21	Data use	Text	100	Data uses description
22	Mapped area: Country/State/District	Text	50	Locational Information of the data
23	Size	Text	15	Data size in MB

<b>Sr. No.</b>	<b>Image Metadata (Raw &amp; Ortho-Mosaic Image)</b>	<b>Data_Type</b>	<b>Data_Size</b>	<b>Description</b>
1	Project Name	Text	100	Project Name - GIS database Preparation for WRD
2	Name of Satellite / Drone	Text	50	Satellite / Drone details
3	Sensor / Camera	Text	20	Name of the Sensor / camera used for capturing
4	Path	Numeric	10	Path number
5	Row	Numeric	10	Raw number
6	Overlap	Percentage		Overlapping Percentage at along track and across track
7	Height	Numeric	5	Image acquired height in Meter

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8	Date and Time of Image	Date		Image acquired date and Time
9	File format	Text	10	File format .shp, .Geotiff, .xls etc
10	Radiometric Resolution	Numeric	2	Radiometric Resolution in Bits, 7, 8, 12, 16 etc
11	Spatial resolution	Float	4,2	Spatial Resolution in CM
12	No. of Bands	Text	10	Image bands no. and Name, 3 Bands RGB
13	No. of rows	Numeric	15	No. of rows in Image
14	No. of columns	Numeric	15	No. of columns in Image
15	Coordinate System	Text	20	Geographic, Planimetric
16	Name of Projection	Text	50	Transverse Mercator, Lambert Conformal Conic
17	Datum	Text	10	WGS – 84
18	Scale	Numeric	5	500, 1000, 2000 etc
19	Locational Accuracy	Numeric	4	Locational Accuracy in CM
20	Data Owner Name, Email, Phone	Text	200	Data owner Dept. Name, Mail, Phone No
21	Agency Name, Address, Phone	Text	200	Data preparation agency, Address, Phone No.
22	Manager, Phone, Email	Text	200	Data preparation Manager, Phone No. and Email
23	Agency Website	Text	50	Data preparation Agency Website
24	Image Area	Text	50	Locational Information of the area
25	Size	Text	15	Data size in MB

Sr. No.	Non-Spatial Metadata	Data_Type	Data_Size	Description
1	Project Name	Text	100	Project Name - GIS database Preparation for WRD
2	File Name	Text	15	Name of the File
3	File Description	Text	100	Detailed description of the File
4	Data Source	Text	50	Data collected from - Agency name
5	File Format	Text	10	File format
6	Data Owner Name, Email, Phone	Text	200	Data owner Dept. Name, Mail, Phone No
7	Agency Name, Address, Phone	Text	200	Data preparation agency, Address, Phone No.
8	Manager, Phone, Email	Text	200	Data preparation Manager, Phone No. and Email
9	Agency Website	Text	50	Data preparation Agency Website
10	Survey Year	Numeric	4	Year of Survey
11	Data Creation: Day/Month/Year	Date		Data Creation Date
12	Data valid up to: Day/Month/Year	Date		Data Validation Date
13	Data use	Text	100	Data uses description
14	area: Country/State/District	Text	50	Locational Information of the data
15	Size	Text	15	Data size in MB

**Annexure 19: Attributes List for Index maps and Village maps**

Sr.	Map_Name	Layers	Geometry	Description
1	2	3	4	5
1	Index Map	Command Area	Polygon	Index map of the Command area should Contents: 1. Title, Sub-Title, Year 2. Location Map 3. All layers with its symbol 4. Appropriate Labels 5. Map description with all Areas values, Agency, Office Info 6. Suitable Scale and size with identical features on Map 7. In Soft and Hard Copy
		Influence Area	Polygon	
		Admin Boundary	Polygon	
		WRD Admin Boundary	Polygon	
		Settlement	Point	
		Dam	Polygon	
		Canal, PDN, LIS	Polyline	
		River	Polyline	
		Road	Polyline	
		Railway	Polyline	
		WUA	Polygon	
		WRD property - Building, Land	Polygon	
		Major Structure	Point	
2	Village wise PDF	WRD Admin Boundary	Polygon	Village-wise map of the Command area should Contents: 1. Title, Sub-Title, Year 2. Location Map 3. All layers with its symbol 4. Appropriate Labels - Gut No., Crop Type, Area, Water Source etc. 5. Map description with all Areas values, Agency, Office Info 6. Suitable Scale and size with identical features on Map 7. In Soft Copy with Layers on / off function
		Village Boundary	Polygon	
		Cadastral / Gut No	Polygon	
		Pot Hissa	Polygon	
		Crop Type	Polygon	
		Ortho-Mosaic Image	Image	
		Canal, PDN, LIS	Line	
		River	Line	
		Land use	Polygon	
		WUA	Polygon	
		Road	Line	
		Railway	Line	
		Lift Permissions		
		Well/Tubewell	Point	